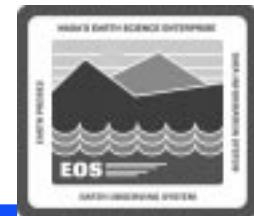


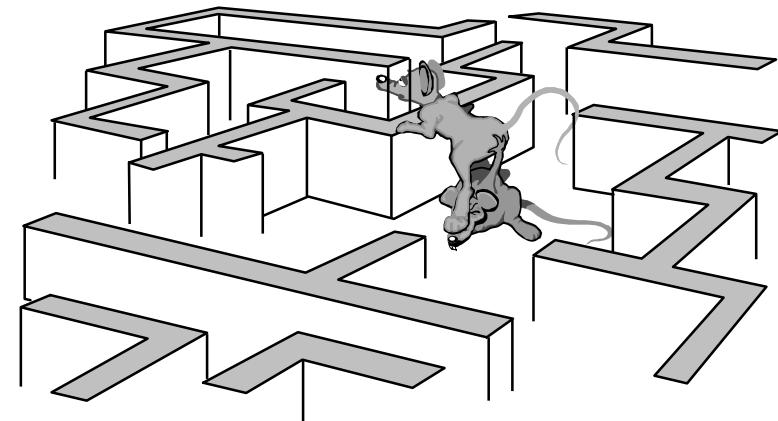
SYSTEM TROUBLESHOOTING

ECS Release 6A Training

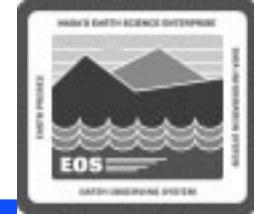
Overview of Lesson



- **Introduction**
- **System Troubleshooting Topics**
 - Configuration Parameters
 - System Performance Monitoring
 - Problem Analysis/Troubleshooting
 - Trouble Ticket (TT) Administration
- **Practical Exercise**

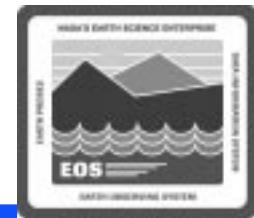


Objectives



- Overall: Proficiency in methodology and procedures for system troubleshooting for ECS
 - Describe role of configuration parameters in system operation and troubleshooting
 - Conduct system performance monitoring
 - Perform COTS problem analysis and troubleshooting
 - Prepare Hardware Maintenance Work Order
 - Perform Failover/Switchover
 - Perform general checkout and diagnosis of failures related to operations with ECS custom software
 - Set up trouble ticket users and configuration

Importance

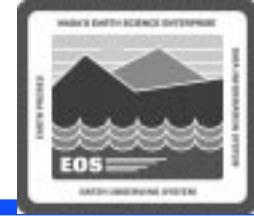


Lesson helps prepare several ECS roles for effective system troubleshooting, maintenance, and problem resolution:

- DAAC Computer Operator, System Administrator, and Maintenance Coordinator
- SOS/SEO System Administrator, System Engineer, System Test Engineer, and Software Maintenance Engineer
- DAAC System Engineers, System Test Engineers, Maintenance Engineers

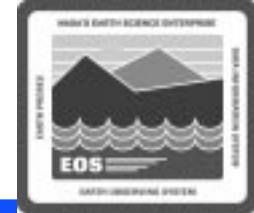


Configuration Parameters



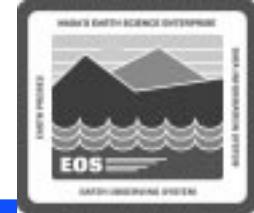
- Default settings may or may not be optimal for local operations
- Changing parameter settings
 - May require coordination with Configuration Management Administrator
 - Some parameters accessible on GUIs
 - Some parameters changed by editing configuration files
 - Some parameters stored in databases
- Configuration Registry
 - Script loads values from configuration files
 - GUI for display and modification of parameters
 - Script moves (re-names) configuration files so ECS servers obtain needed parameters from Registry Server when starting

System Performance Monitoring



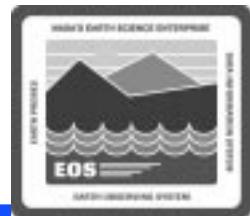
- **Maintaining Operational Readiness**
 - **System operators -- close monitoring of progress and status**
 - Notice any serious degradation of system performance
 - **System administrators and system maintenance personnel -- monitor overall system functions and performance**
 - Administrative and maintenance oversight of system
 - Watch for system problem alerts
 - Use monitoring tools to create special monitoring capabilities
 - Check for notification of system events

Accessing the EBnet Web Page



- **EBnet is a WAN for ECS connectivity**
 - DAACs, EDOS, and other EOSDIS sites
 - Interface to NASA Internet (NI)
 - Transports spacecraft command, control, and science data
 - Transports mission critical data
 - Transports science instrument data and processed data
 - Supports internal EOSDIS communications
 - Interface to Exchange LANs
- **EBnet home page URL**
 - <http://bernoulli.gsfc.nasa.gov/EBnet/>

EBnet Home Page



**Welcome to the
EOSDIS Backbone Network (EBnet) Web Site**

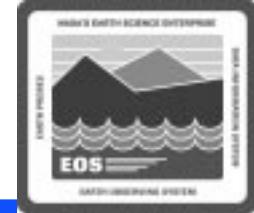
The diagram illustrates the EBnet network as a central hub connected to various peripheral nodes. The central node is labeled "EBnet". Surrounding it are nodes representing different network components and services:

- Schedules (represented by a book icon)
- Costs (represented by a calculator icon)
- Traffic Requirements (represented by computer monitors and a question mark icon)
- What's New? (represented by a newspaper icon)
- Documentation (represented by a stack of books icon)
- NESN (represented by a globe icon)
- NASA (represented by a NASA logo icon)
- Related Web Sites (represented by a server rack icon)
- Open Issues (represented by a server rack icon)
- Modeling (represented by a server rack icon)
- Design & Implementation (represented by a blueprint icon)
- Contacts (represented by a telephone icon)
- Schedules (represented by a book icon)

NASA IT Privacy Warning Banner
NASA IT Security Warning Banner

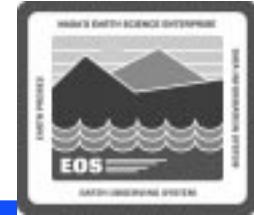
Send mail to tearman_sherry@bah.com

Checking Network Health & Status



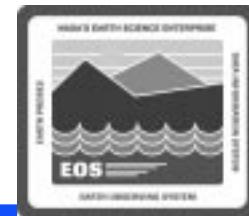
- **Whazzup??? system management tool**
 - Host and mode views of network resources and servers
 - Status information on resources
 - Purple: Inability to ping specified host
 - Blue: Incomplete data collection
 - Red: Server is down
 - Yellow: Warning threshold has been exceeded
 - Performance monitoring capability
- **ECS Assistant and ECS Monitor**
 - Operator interface for starting servers
 - Indication of network and server status and changes
 - Easy to use capability to ping all servers

Whazzup Welcome Screen



The screenshot shows a vintage-style web browser window titled "Netscape: Whazzup77 v2.0". The URL bar shows "Location: http://ECSweb02.SSDC.NASA.GOV/". The main content area displays the title "EcMsWz-Whazzup???" and a redacted section. Below this is the heading "Welcome to Whazzup...". A note states: "This tool is designed to allow SystemAdmins to view at a glance the current status of both the ECS Customer Code and any performance issues within the UNIX servers." It includes instructions: "The recommended display is to select "What's Doing" from the "What's Mode" pull-down menu and then right click on "Performance" and select "Open Link in New Window". This will provide the operator with a view of Customer Code and System performance on the same screen." A "Status color legend" follows, with four items: "Can't ping host" (purple), "Data collection timed out" (blue), "Server down / Critical threshold crossed" (red), and "Warning threshold crossed" (yellow). At the bottom, there is a navigation bar with buttons for "Host Status", "Mode Status", "Verify Mode", "Performance Management", and a large red "Upbox" button. The status bar at the bottom left shows "100%".

Whazzup: Performance Stats



Netscape Whazzup7 v2.0

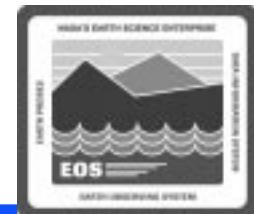
Last Update: Oct 13, 2008 - 12:50:32 [Update]

Performance Stats

Hostname	CPU used	Load	Swap	Free Mem	Mem Free	Most Full	Disk	Disk IO
tsa001	2%	0.08 0.02 0.03	807604 K	4756 K	20000 K	0	0	0
tsa002	3%	0.28 0.18 0.08	5128000 K	56760 K	0	0	0	0
tsa003	8%	0.08 0.08 0.05	405276 K	21832 K	0	0	0	0
tsa004	5%	0.04 0.05 0.05	7048960 K	56032 K	0	0	0	0
tsa005	9%	0.08 0.05 0.05	208176 K	5464 K	0	0	0	0
tsa006	>8%	0.08 0.05 0.05	0	0	0	0	0	0
tsa007	2%	0.18 0.08 0.08	802086 K	323376 K	0	0	0	0
tsa008	2%	0.05 0.03 0.04	413672 K	10216 K	0	0	0	0
tsa009	8%	0.08 0.07 0.07	316380 K	89796 K	0	0	0	0
tsa010	17%	0.12 0.03 0.01	1848576 K	13184 K	0	0	0	0
tsa011	9%	0.08 0.08 0.08	4828080 K	25047 K	0	0	0	0
tsa012	18%	0.29 0.11 0.02	5449556 K	45549 K	0	0	0	0
tsa013	34%	0.08 0.13 0.17	5448560 K	23034 K	0	0	0	0
tsa014	2%	0.23 0.25 0.25	1172646 K	470516 K	0	0	0	0
tsa015	6%	0.41 0.08 0.23	1299176 K	138829 K	0	0	0	0
tsa016	2%	0.08 0.32 0.32	12586 K	6891 K	0	0	0	0
tsa017	1%	0.38 0.32 0.31	115860 K	19490 K	0	0	0	0
tsa018	2%	0.08 0.04 0.04	455246 K	54880 K	0	0	0	0
tsa019	2%	0.02 0.02 0.04	891584 K	36424 K	0	0	0	0
tsa020	4%	0.02 0.02 0.02	402946 K	26135 K	0	0	0	0
tsa021	2%	0.01 0.08 0.09	1848576 K	54948 K	0	0	0	0
tsa022	8%	0.08 0.08 0.08	5128080 K	23537 K	0	0	0	0
tsa023	8%	0.12 0.13 0.13	711632 K	5584 K	0	0	0	0
tsa024	1%	0.01 0.08 0.09	26101964 K	287987 K	0	0	0	0
tsa025	4%	0.08 0.08 0.08	18958572 K	40134 K	0	0	0	0

Host Status: Mode Status: Verify Mode: Performance Management Update

Whazzup: Verify Mode, What's Down



Netscape: Whazzup?? v2.0

File Edit View Go Communicator Bookmarks Location: http://etims01w:5150/ What's Related Help

Required Servers Currently Down...

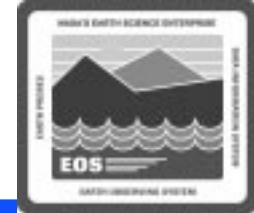
Last Update: Oct 13, 2000 - 12:30:33 [Update]

Mode	Server	Host	UID	PID	STime	Size
OPS	EcCsRegistry	t1icg01	-	-	-	-
	EcDsStFTPClientDaemon	t1icg01	-	-	-	-
TS1	EcCsEmailParser	t1imr02	-	-	-	-
	EcCsLandsat7Gateway	t1imr02	-	-	-	-
TS2	EcCsMojoGateway	t1imr02	-	-	-	-
	All required servers are down					
TS3	EcDsStStagingDiskServer	t1dgs01	-	-	-	-
	EclnAuto	t1icg03	-	-	-	-
	EclnGran	t1icg03	-	-	-	-
	EclnPolling	t1icg04	-	-	-	-
	EclnPolling	t1icg03	-	-	-	-
	EclnReqMgr	t1icg03	-	-	-	-
	EcPiodMgr	t1ps01	-	-	-	-

Host Status: Mode Status: Verify Mode: Performance Management Update

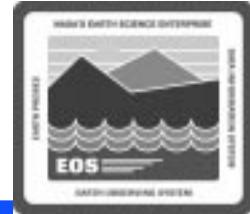
A screenshot of a Netscape browser window displaying the Whazzup application. The title bar says "Netscape: Whazzup?? v2.0". The address bar shows "http://etims01w:5150/". The main content area displays a table of servers currently down, categorized by mode (OPS, TS1, TS2, TS3). The TS2 row has a red background. The TS3 row has a black background. The bottom navigation bar includes buttons for Host Status, Mode Status, Verify Mode, Performance, Management, and Update.

Quick Check on Server Availability



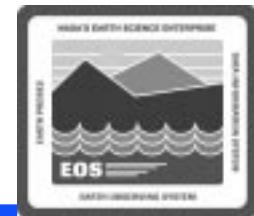
- The Whazzup??? tool is a web-based application
- Use a web browser for a quick check on servers
 - Start the tool
 - Select “What’s Down” from the Verify Mode pop-up menu
 - Servers that are down are displayed by mode
 - If a host is down, its entries are highlighted in purple

ECS Assistant and ECS Monitor



- **ECS Assistant**
 - Independently available at each host
 - Subsystem Manager GUI permits subsystem installs and staging ESDTs and DLLs into their directories
 - ESDTs: CUSTOM/data/ESS
 - DLLs: CUSTOM/lib/ESS
- **ECS Monitor**
 - Independently available at each host
 - Display the status of servers by installed components
 - Ping all servers

ECS Assistant Manager Windows



ECS ASSISTANT (3.1.1)

File Help

Subsystem Manager ESDT Manager E. A. S. I. DB Viewer Help Exit

USER: cmshared HOST: t1dms02 SITE: VATC VIEW: NULL

EOSDIS

ECS ASSISTANT: Subsystem Manager User: cmshared Host: t1dms02 Site: VATC

File Tools Utilities Database Install Shutdown Servers Keytabs Configuration Stage Area Installation Start Servers View Task Output

Frame 1 Mode: TS3

SUBSYSTEMS

- CLS
- CSS
- DM
- DPS
- DSS
- INGEST
- IOS
- MSS
- PLS
- EcPl
 - EcPlPlanningApp
 - EcPlSubMgr
 - EcPlOldMgr
 - EcPlOldMgrClient
 - EcPlNsh
 - EcPlPREditor
 - EcPlPREditor_IF
 - EcPlProdStrat
 - EcPlRm
 - EcPlSns
 - EcPlSubsEdit
 - EcPlTTI
 - EcPlTBD
 - EcPlRpRe
 - EcPlRpRm
 - EcPlRpS1
 - EcPlRpTTI
- TOOLKIT
- VOC

Frame 2 Settings

ClearCase View: NULL
Selected Subsystem: PLS
Selected Component: EcPl
Selected Application: EcPlPlanningApp

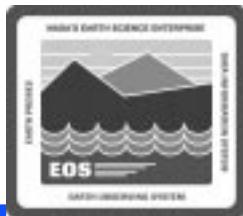
Installation Statistics

Install Record Entry
Installed by : uid=112(cmst33) gid=90(cmst33)
Date/Time : 09/07/2000 18:15:20
Clearcase view : NONE
Stage Location : MODE
Installation Mode : /net/ticode1/codedrop2/6A_01/SUN/
Installation Type : NONDEV
Subsystem Installed : PLS
Component Installed : EcPl

Legend

- Not Installed
- Successfully Installed
- Installation Warnings
- Installation Errors

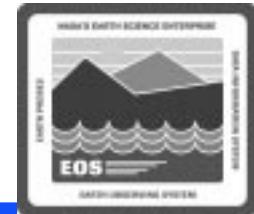
ECS Assistant Monitor Windows



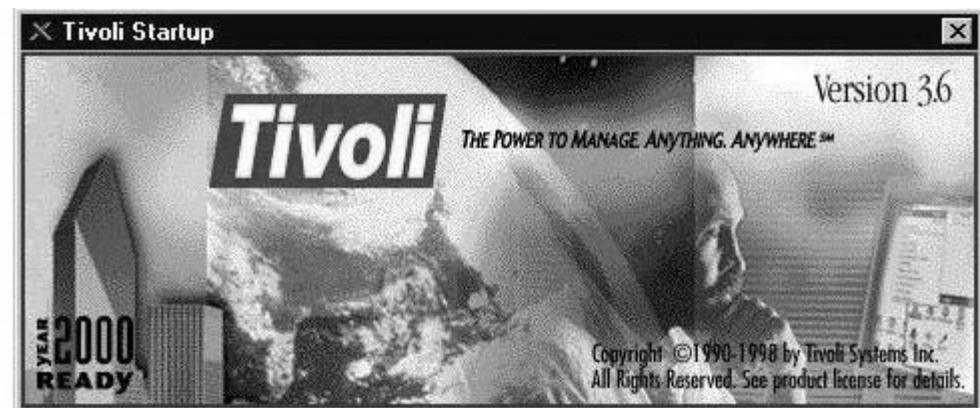
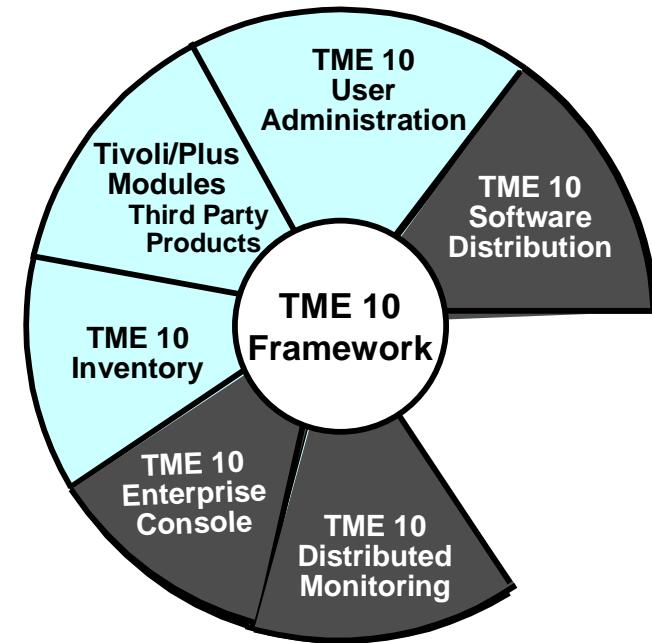
ECS Monitor					
Mode: TS3	Hostname: t1pls01				
Subsystem:	User Id: cmshared				
Component:					
	Thu Nov 9 15:03:53 EST 2000				
Exit	Update Now	cdsping all servers...			<input checked="" type="checkbox"/> Auto Update
SERVER	STATUS	PID	USERID	START TIME	
EcDpPrDeletion	DOWN				
EcDpPrJobMgmt	DOWN				
EcPl0dMgr	UP	23493	cmshared	2000/11/08 17:38:51	
EcPlSubMgr	UP	18500	cmshared	2000/11/07 15:36:44	

ECS Monitor (cdsping)		
Server	On	Status
EcoOrderManagerObj	t1aa06	is listening
EcoOrderStatBarcode	t1aa02	is not listening
EcoRegistry	t1aa03	is listening
EcoSlickServer	t1aa01	is listening
EcoEcsWebGateway	t1aa01	is listening
EcoMsiServer	t1aa01	is listening
EcoPmRelation	t1aa02	is listening
EcoPmJobOffer	t1aa02	is not listening
EcoDistributionServer	t1aa01	is listening
EcoHdEcServer_1_01	t1kg01	is listening
EcoHdEcServer_1_02	t1kg01	is listening
EcoHdEcServer_1_03	t1kg01	is listening
EcoHdEcServer_2_01	t1kg01	is listening
EcoHdEcServer_2_02	t1kg01	is listening
EcoHdEcServer_2_03	t1kg01	is listening
EcoHdEcServer_3_01	t1kg01	is listening
EcoHdEcServer_3_02	t1kg01	is listening
EcoHdEcServer_3_03	t1kg01	is listening
EcoScienceDataServer01	t1ao01	is listening
EcoScienceDataServer02	t1ao01	is listening
EcoScienceDataServer03	t1ao01	is listening
EcoScienceDataServer04	t1ao01	is listening
EcoSFTPServer	t1ao01	is not listening
EcoArchiverServer01	t1ao04	is not listening
EcoRtIServer	t1ao01	is not listening
EcoRtpFtpServer	t1ao04	is not listening
EcoRtpFtpServer_DFT	t1dg03	is not listening
EcoRtpFtpServer_KDM	t1ao04	is not listening
EcoRtpProjectServer	t1ao01	is not listening
EcoRtpMonitorServer	t1ao04	is not listening
EcoRtpRequestManagerServer-PRI	t1ao01	is listening
EcoRtpStagingLinkServer04	t1ao04	is not listening
EcoRtpStagingLinkServer10_3	t1ao03	is not listening
EcoRtpStagingMonitorServerADM	t1ao04	is not listening
EcoRtpStagingMonitorServerDFTS	t1dg03	is not listening
EcoRtpServer	t1aa02	is listening
EcoRtis	t1ao03	is not listening
EcoGran	t1ao03	is not listening
EcoGran0	t1ao03	is not listening
EcoGrid	t1ao03	is not listening
EcoRealty	t1ao03	is not listening
EcoKillerServer	t1aa01	is listening
EcoUdgr	t1pl01	is listening
EcoUdgr	t1pl01	is listening
EcoEventServer	t1aa02	is listening
EcoSubServer	t1aa02	is listening
NoSqlRegisterHttp	t1ao06	is listening
NoSqlUserPrefListHttp	t1ao06	is listening
NoSqlUserRequestHttp	t1ao06	is listening

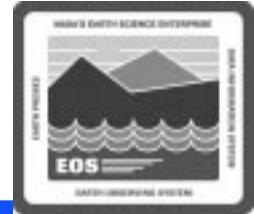
Tivoli Management Environment



- Tivoli provides a framework for various system monitoring and management applications
- ECS uses three Tivoli applications
 - Tivoli Enterprise Console: senses management events
 - Tivoli Software Distribution: supports software distribution and installation
 - Tivoli Distributed Monitoring: monitors system and generates events and alarms

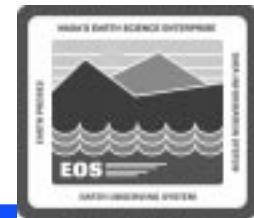


Tivoli Management Region (TMR)

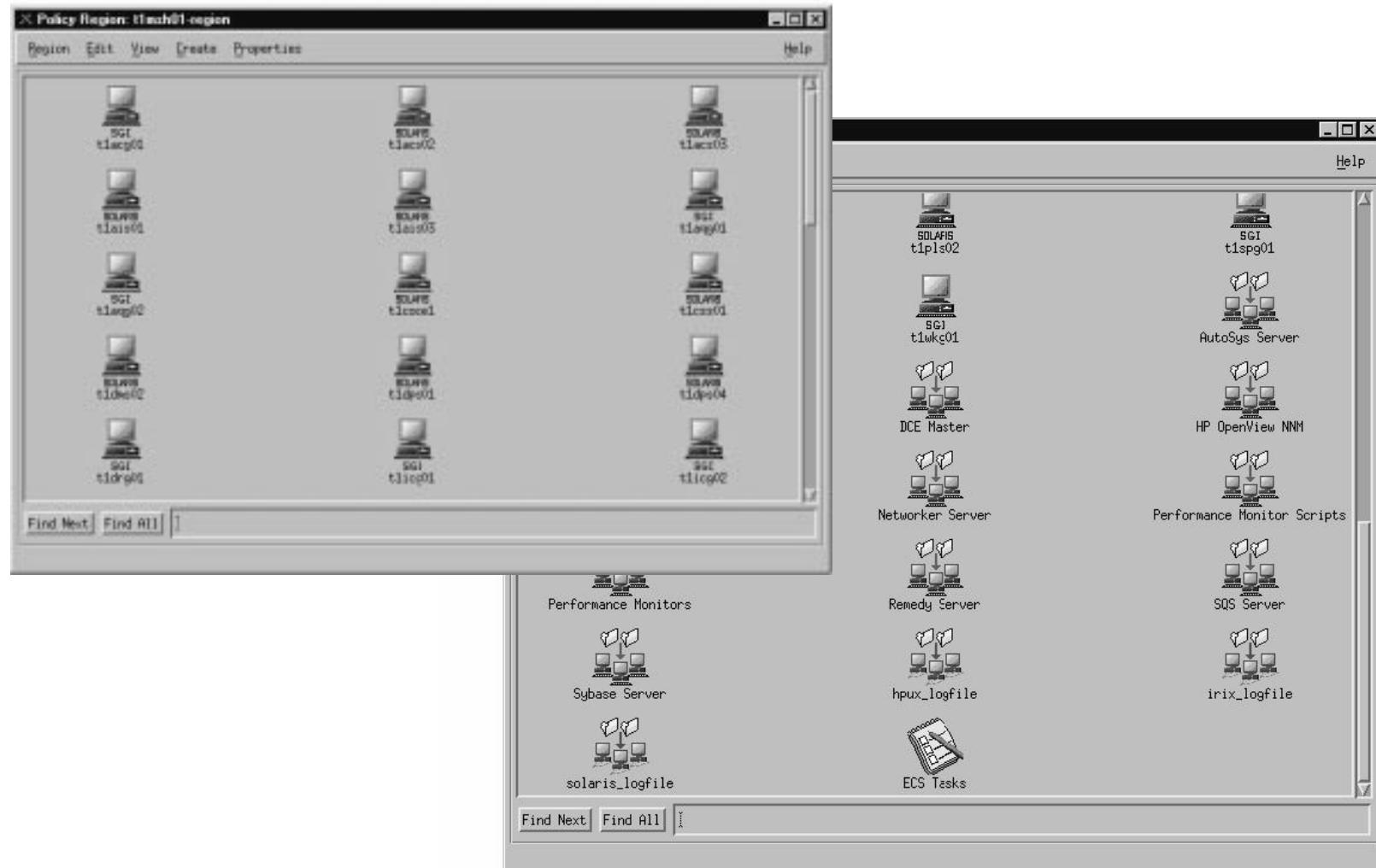
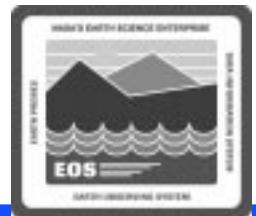


- A TMR is a primary server and its clients
- For ECS, the TMR is usually installed on the MSS server (e.g., g0msh08, l0msh03, n0msh03, e0msh03)
- TMR access is through a policy region icon on the Administrator Desktop screen
 - A TMR may have more than one policy region

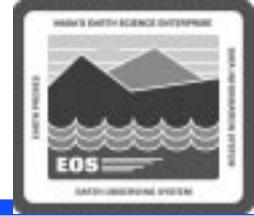
Tivoli Administrator Desktop



Policy Region Content

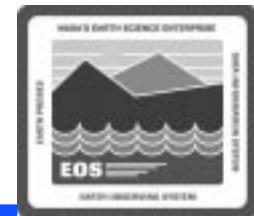


Distributed Monitoring



- Checks status of networked resources (e.g., systems, applications, processes)
- Administrator sets up monitoring *profiles* for resources (uses Monitor Profile Edit page)
 - Set monitoring policy
 - Change monitoring parameters
 - Define automated responses (e.g., change status of icon, send e-mail, activate a pop-up window, run a program or script)
- Multiple monitoring profiles can be created and distributed across several hosts

Monitor Profile Edit Page



Edit Monitor

Profile: EcMsAgSubAgent
Monitor: Daemon status

Daemon EcMsAgSubAgent Daemons...

Response level: critical trigger when: Becomes unavailable

Send Tivoli Notice Sentry... Popup Admin... Change Icon Tasks...

Send E-mail to []

Log to file: [] File...

On monitored host On host [] Host...

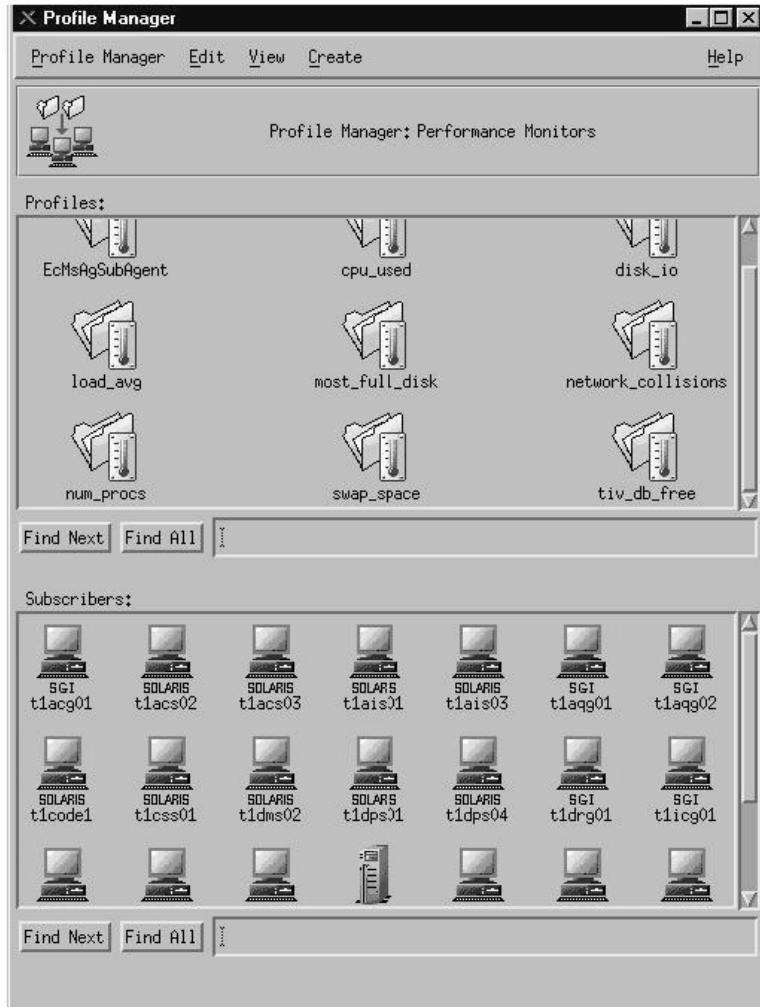
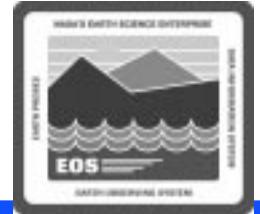
Run program: [] Program...
 On monitored host On host [] Host...

Send Enterprise Console event Critical Server: EventServer Servers...

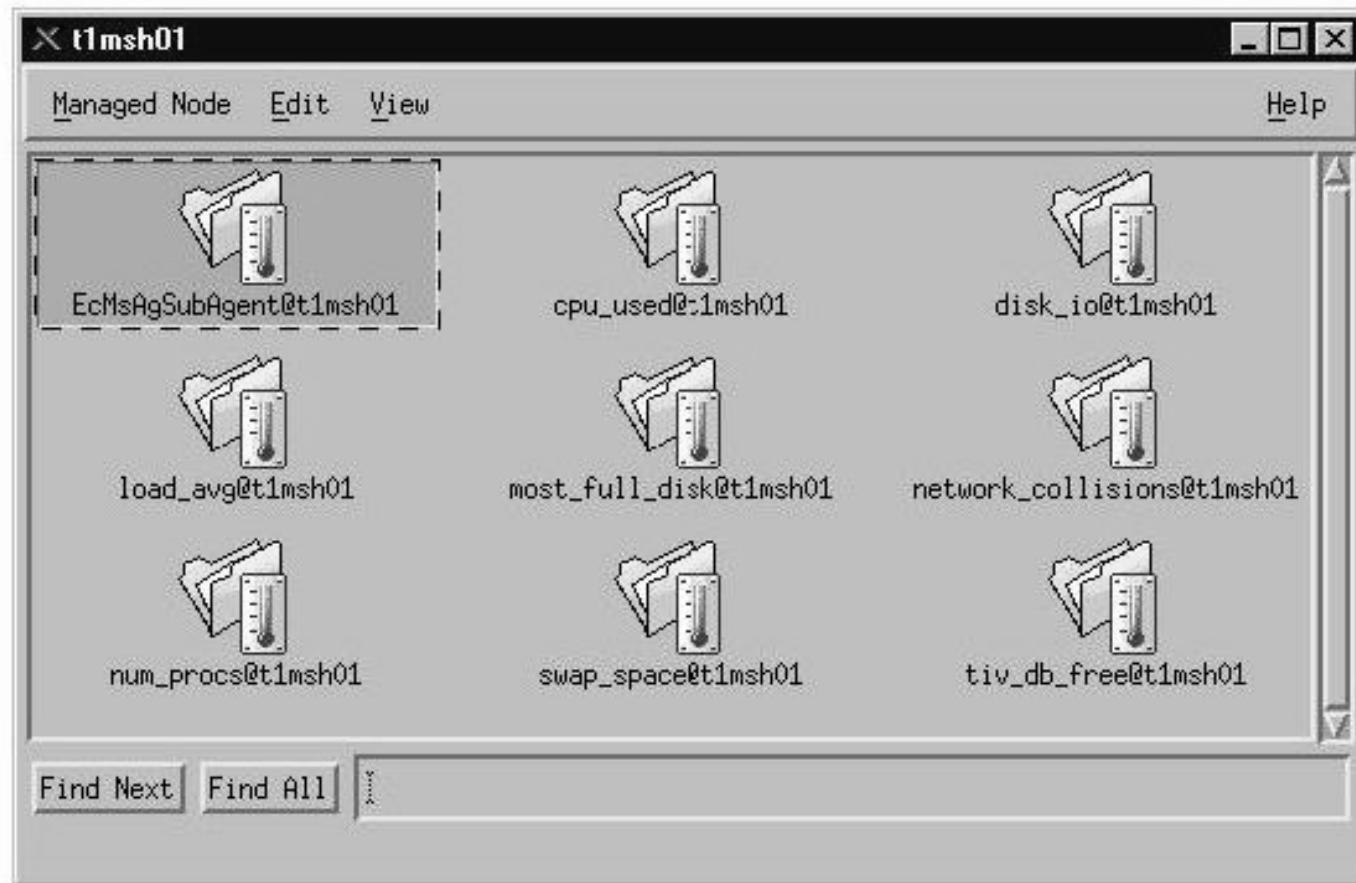
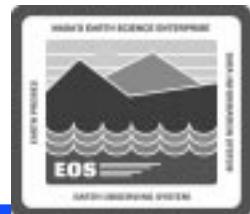
Set Message Styles... Set Distribution Actions... Set Monitoring Schedule...

Change & Close Cancel Help...

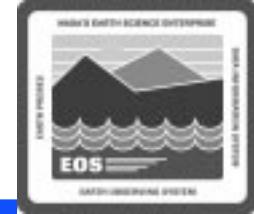
Performance Monitor Profile Manager



Monitor Profiles

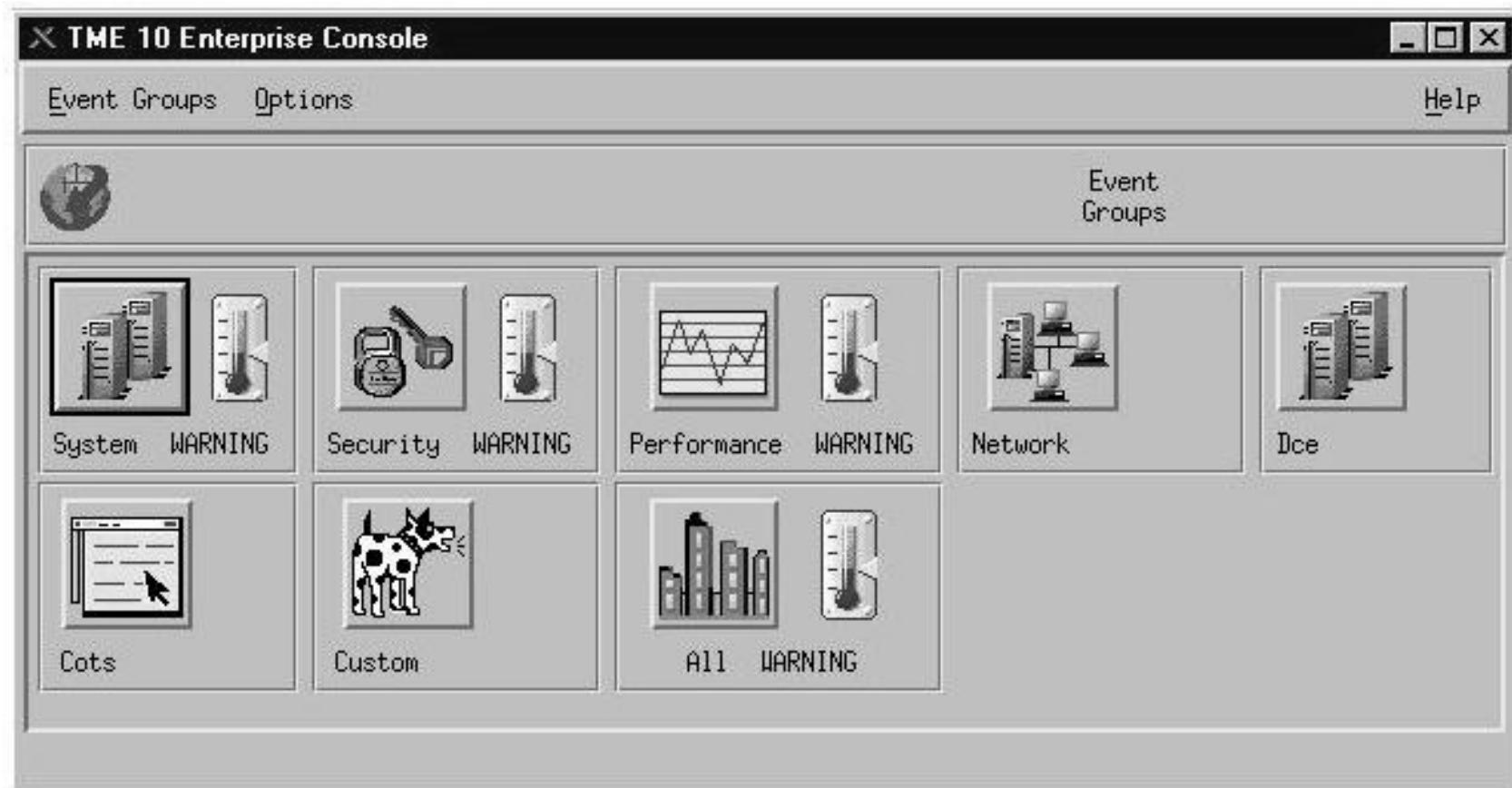
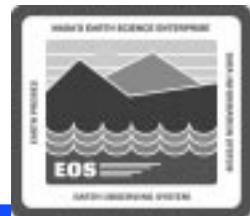


Tivoli Enterprise Console

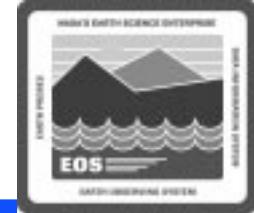


- **Monitors defined events across individual items or groups of items**
- **Event Console displays notification of events (changes in state of a network or host)**
 - Permits response to events
- **Icons depicted in hierarchical displays to permit determination of specific errors**

Tivoli Enterprise Console Event Groups

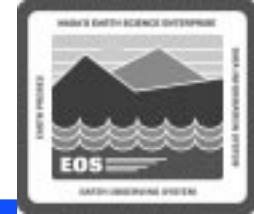


Analysis/Troubleshooting: System



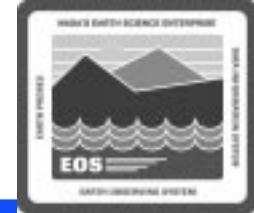
- **COTS product alerts and warnings**
(e.g., AutoSys/Xpert, Tivoli Management Environment)
- **COTS product error messages and event logs**
(e.g., AutoSys)
- **ECS Custom Software Error Messages**
 - Listed in 609-CD-600-001

Systematic Troubleshooting



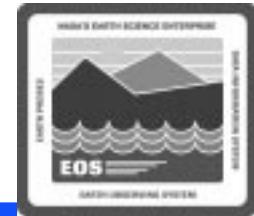
- **Thorough documentation of the problem**
 - Date/time of problem occurrence
 - Hardware/software
 - Initiating conditions
 - Symptoms, including log entries and messages on GUIs
- **Verification**
 - Identify/review relevant publications (e.g., COTS product manuals, ECS tools and procedures manuals)
 - Replicate problem
- **Identification**
 - Review product/subsystem logs
 - Review ECS error messages
- **Analysis**
 - Detailed event review (e.g., Tivoli notifications, server logs)
 - Troubleshooting procedures
 - Determination of cause/action

Analysis/Troubleshooting: Hardware



- ECS hardware is COTS
- System troubleshooting principles apply
- Whazzup??? for quick assessment of status
- Server logs for event sequence
- Initial troubleshooting
 - Review error message against hardware operator manual
 - Verify connections (power, network, interface cables)
 - Run internal systems and/or network diagnostics
 - Review system logs for evidence of previous problems
 - Attempt system reboot
 - If problem is hardware, report it to the DAAC Maintenance Coordinator, who prepares a maintenance Work Order using ILM software

XRP-II Main Screen



XRP-II - Baseline User

ECS Management System
Main Menu

mainm 07/17/2000 13:28

1. Baseline Management

2. ILM Main Menu

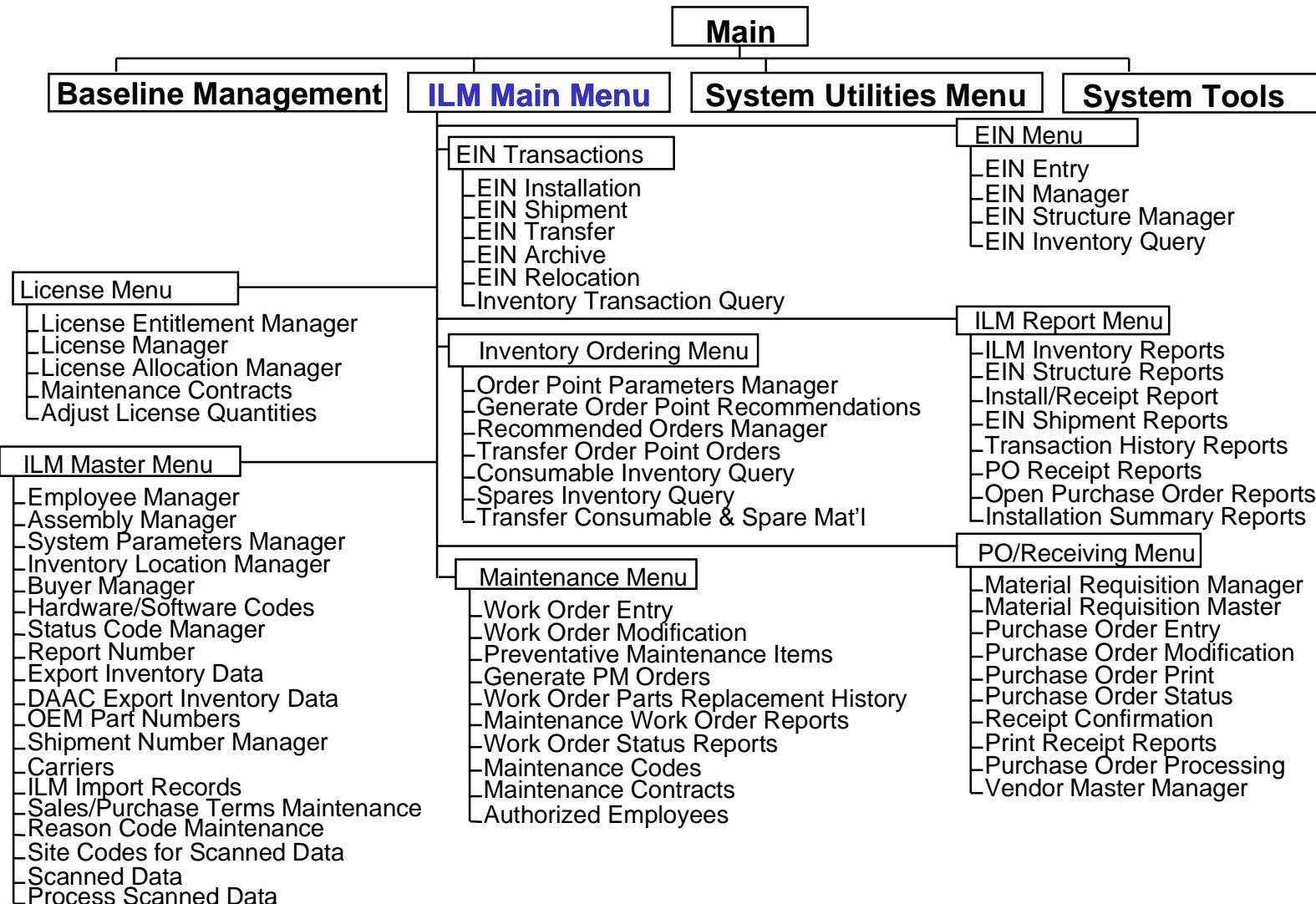
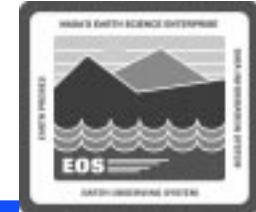
3. System Utilities Menu

4. System Tools

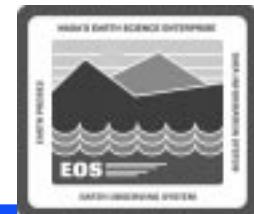
Please enter selection (1 - 4 or name): [] -----

F1-help F3-prior menu F5-select F8-exit

XRP-II ILM Hierarchical Menu Structure



ILM Work Order Entry Screen



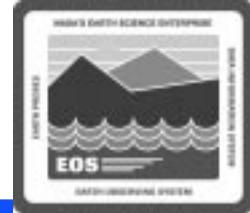
wordent Work Order Entry

Last: 1 Current: 1

[wordent] WORK ORDER ENTRY:	
WORK ORDER:	000000001
PARENT EIN:	00001642
Serial Number:	S51554
ECS NAME:	g0drg01
DEM Part:	R-97804-S2
DEM Desc:	Challenge XL Rack Server
Mod/Ver:	XL
Building:	32
	Location: GSFC
	Room: N30
TROUBLE TICKET:	
NOTIFICATION DATE:	07/14/00
PRIORITY:	
FAILURE DATE:	07/14/00
MFR:	SGI
MAINT VENDOR:	SGI
VENDOR CALL DATE:	07/14/00
VENDOR CONTACT NAME:	Glenn Hagan
VENDOR REFERENCE:	Case ID # 1142620
TIME:	14:00
CODE:	TEXT:
CODE:	NOTE: IP25 failure. Replace CPU board.
CODE:	NOTE:

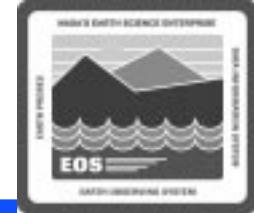
Next Prior View Find Go Select /Sort /Note Items Help More Exit

Hardware Problems: (Continued)



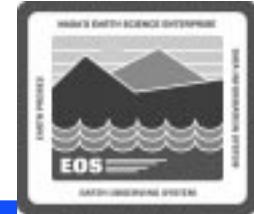
- Difficult problems may require team attack by Maintenance Coordinator, System Administrator, and Network Administrator:
 - specific troubleshooting procedures described in COTS hardware manuals
 - non-replacement intervention (e.g., adjustment)
 - replace hardware with maintenance spare
 - locally purchased (non-stocked) item
 - installed spares (e.g., RAID storage, power supplies, network cards, tape drives)

Hardware Problems: (Continued)



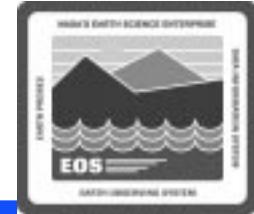
- If no resolution with local staff, maintenance support contractor may be called
 - Update ILM maintenance record with problem data, support provider data
 - Call technical support center
 - Facilitate site access by the technician
 - Update ILM record with data on the service call
 - If a part is replaced, additional data for ILM record
 - Part number of new item
 - Serial numbers (new and old)
 - Equipment Identification Number (EIN) of new item
 - Model number (Note: may require CCR)
 - Name of item replaced

ILM Work Order Modification



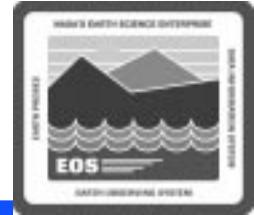
- Completion of Work Order Entry copies active children of parent EIN into the work order
- Use Work Order Modification screen to enter down times, and vendor times and notes
- From Work Order Modification screen, Items Page is used to record details
 - Which item (or items) failed
 - New replacement items
 - Notes concerning the failure

Non-Standard Hardware Support

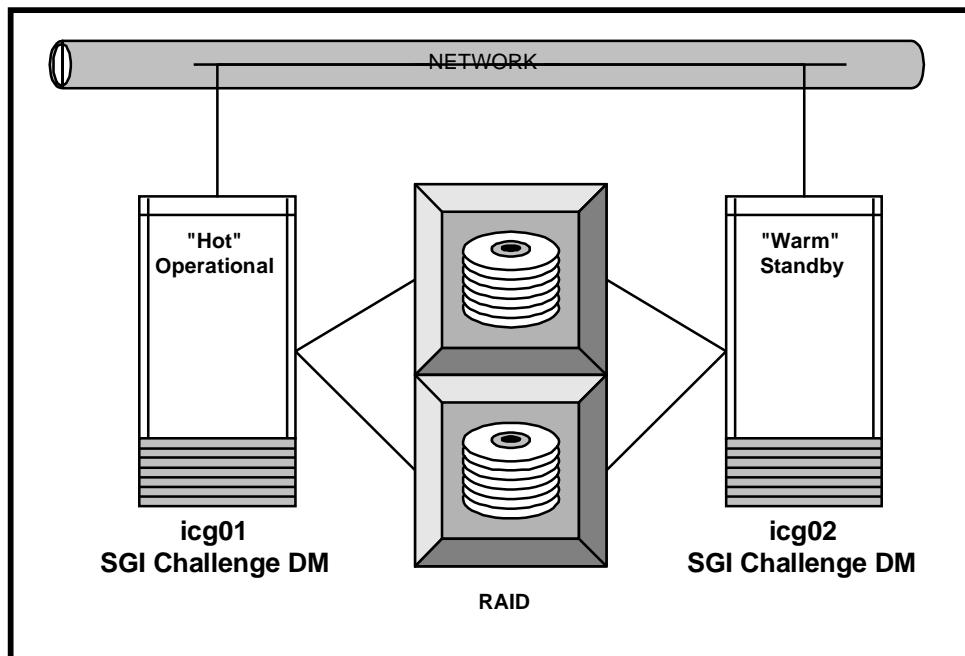


- **For especially difficult cases, or if technical support is unsatisfactory**
 - Escalation of the problem
 - Obtain attention of support contractor management
 - Call technical support center
 - Time and Material (T&M) Support
 - Last resort for mission-critical repairs

Failover/Switchover



- **Hardware consists of one pair of SGI servers (e.g., ICL - Ingest Server)**
- **One server in the pair acts as the “hot” server, the other is a “warm” standby backup**
- **RAID device between the two servers is Dual Ported to both machines (each machine “sees” the entire RAID); a “virtual IP” is established**



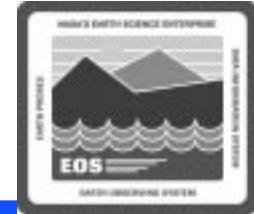
Failover Steps

(assumes warm backup already running DCE, operating system)

1. Detect Failure on primary (e.g., xxicg01)
2. Confirm Failure on primary (e.g., xxicg01)
3. Shutdown primary (e.g., xxicg01)
4. Change ownership of Disk xlv objects from primary to backup (e.g., xxicg02)
5. Re-build xlv objects on backup (e.g., xxicg02)
6. Mount xlv objects (filesystems) on backup (e.g., xxicg02)
7. Export filesystems
8. Turn on IP alias to backup (e.g., xxicg02)
9. Flush EBnet and local Router table

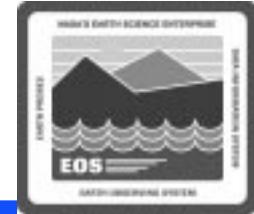
Fallback procedure reverts to primary

Preventive Maintenance



- Elements that may require PM are the STK robot, tape drives, stackers, printers
 - Scheduled by local Maintenance Coordinator
 - Coordinated with maintenance organization and using organization
 - Scheduled to be performed by maintenance organization and to coincide with any corrective maintenance if possible
 - Scheduled to minimize operational impact
 - Documented using ILM Preventive Maintenance record

Troubleshooting COTS Software



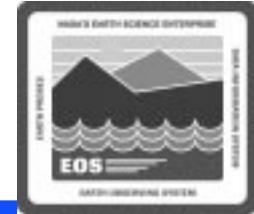
Issues

- Software use licenses
- Obtaining telephone assistance
- Obtaining software patches
- Obtaining software upgrades

Vendor support contracts

- First year warranty
- Subsequent years contracts
- Database at ILS office
- Contact ILS Support
 - E-mail: ilsmaint@eos.hitc.com
 - Telephone: 1-800-ECS-DATA (327-3282)
Option #3, Ext. 0726

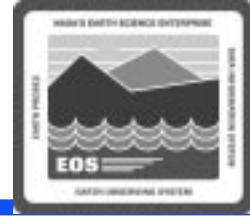
COTS Software Licenses



Maintained in a property database by ECS Property Administrator

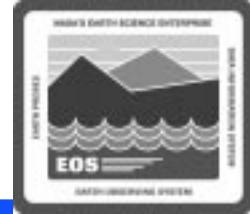
- Licenses vary by type of software and vendor policy
- Property Administrator maintains
 - Master copies of licenses
 - License database
 - Copies of software for installation at sites

COTS Software Installation



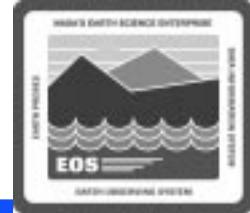
- COTS software is installed with any appropriate ECS customization
- Final Version Description Document (VDD) available
- Any residual media and commercial documentation should be protected (e.g., stored in locked cabinet, with access controlled by on-duty Operations Coordinator)

COTS Software Support



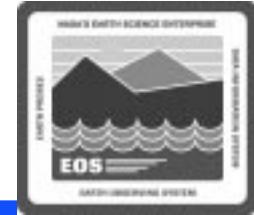
- **Systematic initial troubleshooting**
 - Examine server logs to review event sequence
 - Review error messages, prepare Trouble Ticket (TT)
 - Review system logs for previous occurrences
 - Attempt software reload
 - Report to Maintenance Coordinator (forward TT)
- **Additional troubleshooting**
 - Procedures in COTS manuals
 - Vendor site on World Wide Web
 - Software diagnostics
 - Local procedures
 - Adjustment of tunable parameters

COTS Software Support (Cont.)



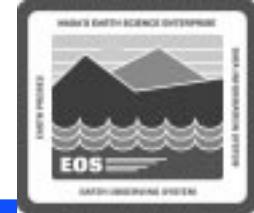
- **Organize available data, update TT**
 - Locate contact information for software vendor technical support center/help desk (telephone number, name, authorization code)
- **Contact technical support center/help desk**
 - Provide background data
 - Obtain case reference number
 - Update TT
 - Notify originator of the problem that help is initiated
- **Coordinate with vendor and CM, update TT**
 - Work with technical support center/help desk (e.g., troubleshooting, patch, work-around)
 - CCB authorization required for patch

COTS Software Support (Cont.)



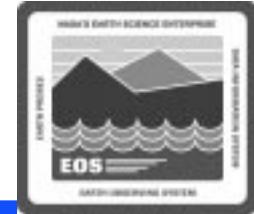
- Escalation may be required, e.g., if there is:
 - Lack of timely solution
 - Unsatisfactory performance of technical support center/help desk
- Notify SOS/SEO
 - Senior Systems Engineers
 - ILS Logistics Engineer coordination for escalation within vendor organization

Troubleshooting of Custom Software



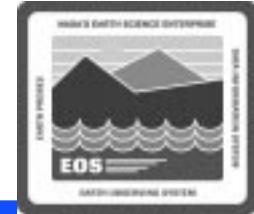
- **Code maintained at ECS Development Facility**
- **ClearCase® for library storage and maintenance**
- **Sources of maintenance changes**
 - M &O CCB directives
 - Site-level CCB directives
 - Developer modifications or upgrades
 - Trouble Tickets

Implementation of Modifications



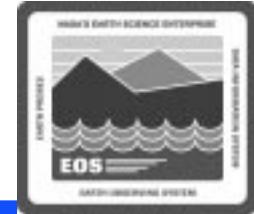
- **Responsible Engineer (RE) selected by each ECS organization**
- **SOS RE establishes set of CCRs for build**
- **Site/Center RE determines site-unique extensions**
- **System and center REs establish schedules for implementation, integration, and test**
- **CM maintains CCR lists and schedule**
- **CM maintains VDD**
- **RE or team for CCR at EDF obtains source code/files, implements change, performs programmer testing, updates documentation**

Custom Software Support



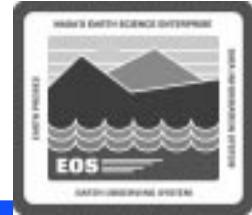
- **Science software maintenance not responsibility of ECS on-site maintenance engineers**
- **Sources of Trouble Tickets for custom software**
 - Anomalies
 - Apparent incorrect execution by software
 - Inefficiencies
 - Sub-optimal use of system resources
 - TTs may be submitted by users, operators, customers, analysts, maintenance personnel, management
 - TTs capture supporting information and data on problem

Custom Software Support (Cont.)



- **Troubleshooting is ad hoc, but systematic**
 - Site report and Trouble Ticket (TT)
 - Referral to ECS Help Desk and System Operational Support
 - Problem Review Board at the Development Facility
- **For problem caused by non-ECS element, TT and data are provided to maintainer at that element**

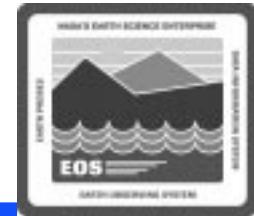
General ECS Troubleshooting



(Note: Lesson Guide has introduction and flow charts, followed by specific procedures)

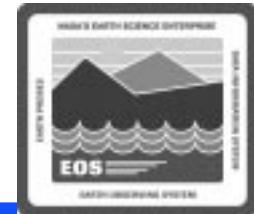
- **Source of problem likely to be specific operations; first chart provides entry to appropriate flow chart**
- **Top-level chart provides entry into troubleshooting flow charts and procedures**
- **Flow charts for problems in basic operational capabilities:**
 - Server status check
 - Connectivity and DCE
 - Database access
 - File access
 - Registering subscriptions

General ECS Troubleshooting (Cont.)



- **Flow charts for problems with basic capabilities (Cont.)**
 - Granule insertion and storage of associated metadata
 - Acquiring data from the archive
 - Ingest functions
 - PGE registration, Production Request creation, creation and activation of a Production Plan
 - Quality Assessment
 - ESDTs installed and collections mapped, insertion and acquiring of a Delivered Algorithm Package (DAP), and SSI&T functions
 - Data search and order
 - Data distribution, including FTPpush and FTPpull
 - (EDC only) Functions associated with Data Acquisition Request
 - (EDC only) Functions associated with On-Demand Production Requests

Troubleshooting: Top-Level Problem Categories



1.0	Server Status Check
See Procedure 1.1	

2.0	Checking Server Log Files
See Procedure 2.1	

3.0	Connectivity/DCE Problems
See Procedure 3.1	

4.0	Database Access Problems
See Procedure 4.1	

5.0	File Access Problems
See Procedure 5.1	

6.0	Subscription Problems
See Procedure 6.1	

7.0	Granule Insertion Problems
See Procedure 7.1	

8.0	Acquire Problems
See Procedure 8.1	

9.0	Ingest Problems
See Procedure 9.1	

10.0	Planning and Data Processing Problems
See Procedure 10.1	

11.0	Quality Assessment Problems
See Procedure 11.1	

12.0	Problems with ESDTs, DAP Insertion, SSI&T
See Procedure 12.1	

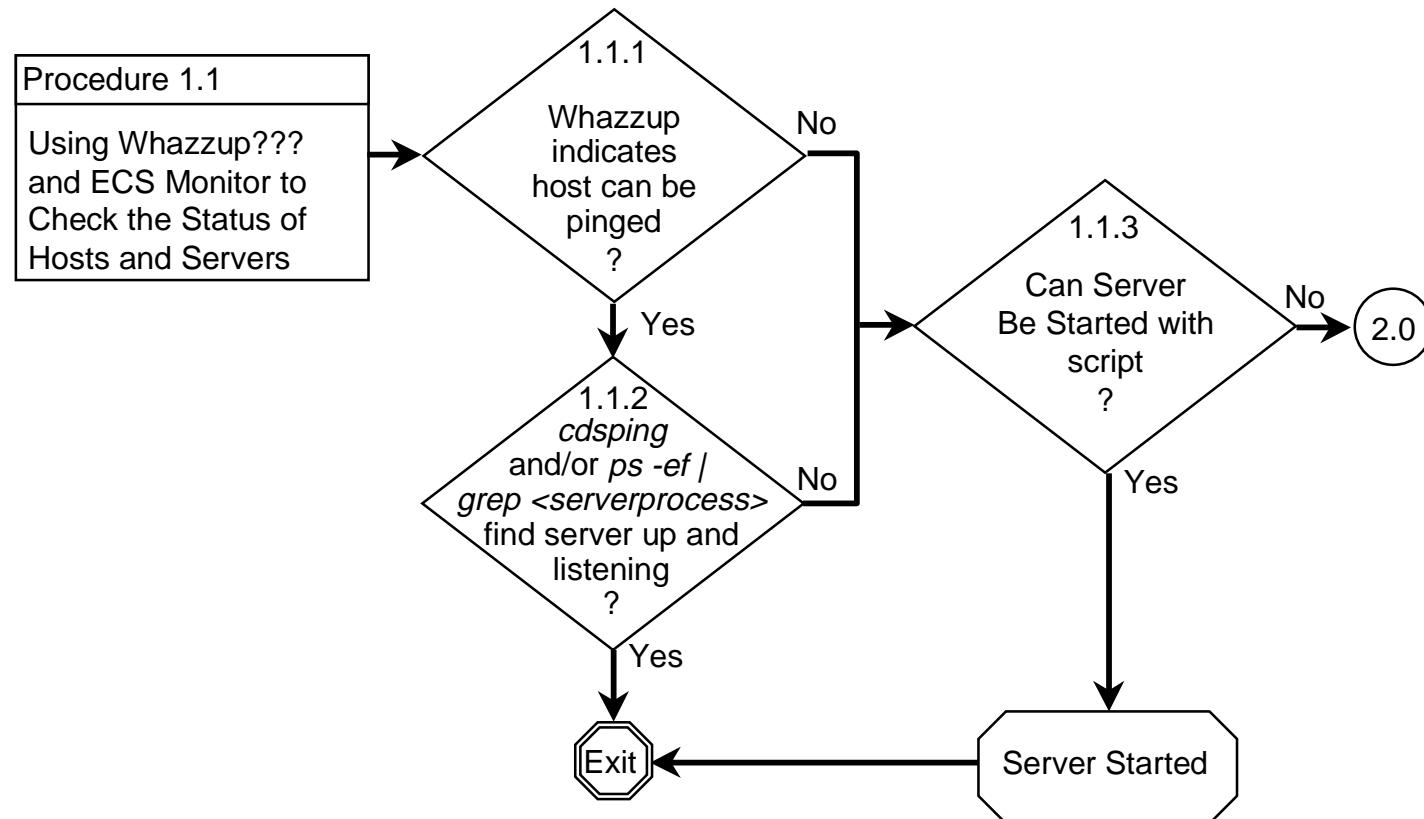
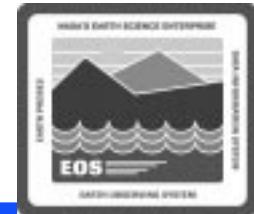
13.0	Problems with Data Search and Order
See Procedure 13.1	

14.0	Data Distribution Problems
See Procedure 14.1	

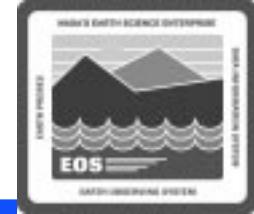
15.0	Problems with Submission of an ASTER Data Acquisition Request (EDC Only)
See Procedure 15.1	

16.0	Problems with On-Demand Production Requests (EDC Only)
See Procedure 16.1	

1.0: Server Status Check

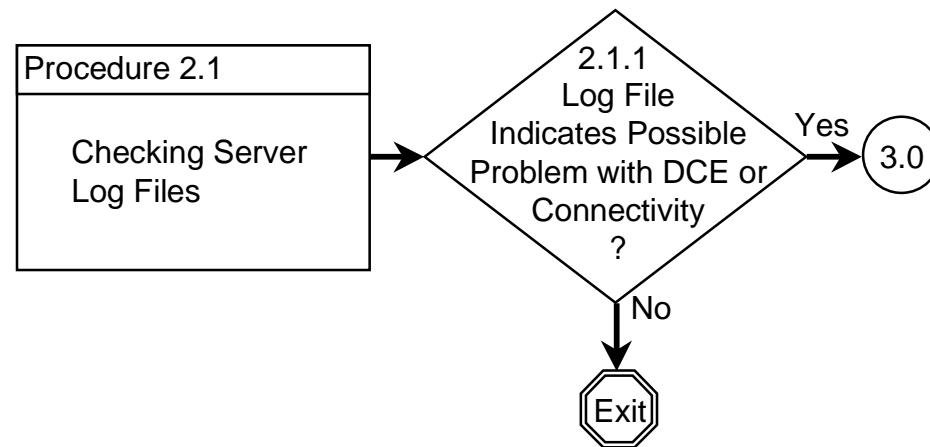
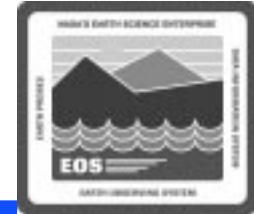


Checking Server Status

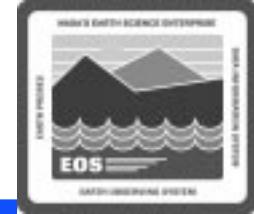


- ECS functions depend on the involved software servers being in an “up” status and listening
- Basic first check in troubleshooting a problem is typically to ensure that the necessary servers are up and listening
- Whazzup??? provides real-time, dynamically updated displays of server and system status
- ECS Monitor can also provide server status, including cdsping to check if a server is listening
- Scripts provide the capability to start and stop servers; available scripts may start an individual server or multiple servers (e.g., servers in a mode)

2.0: Checking Server Log Files

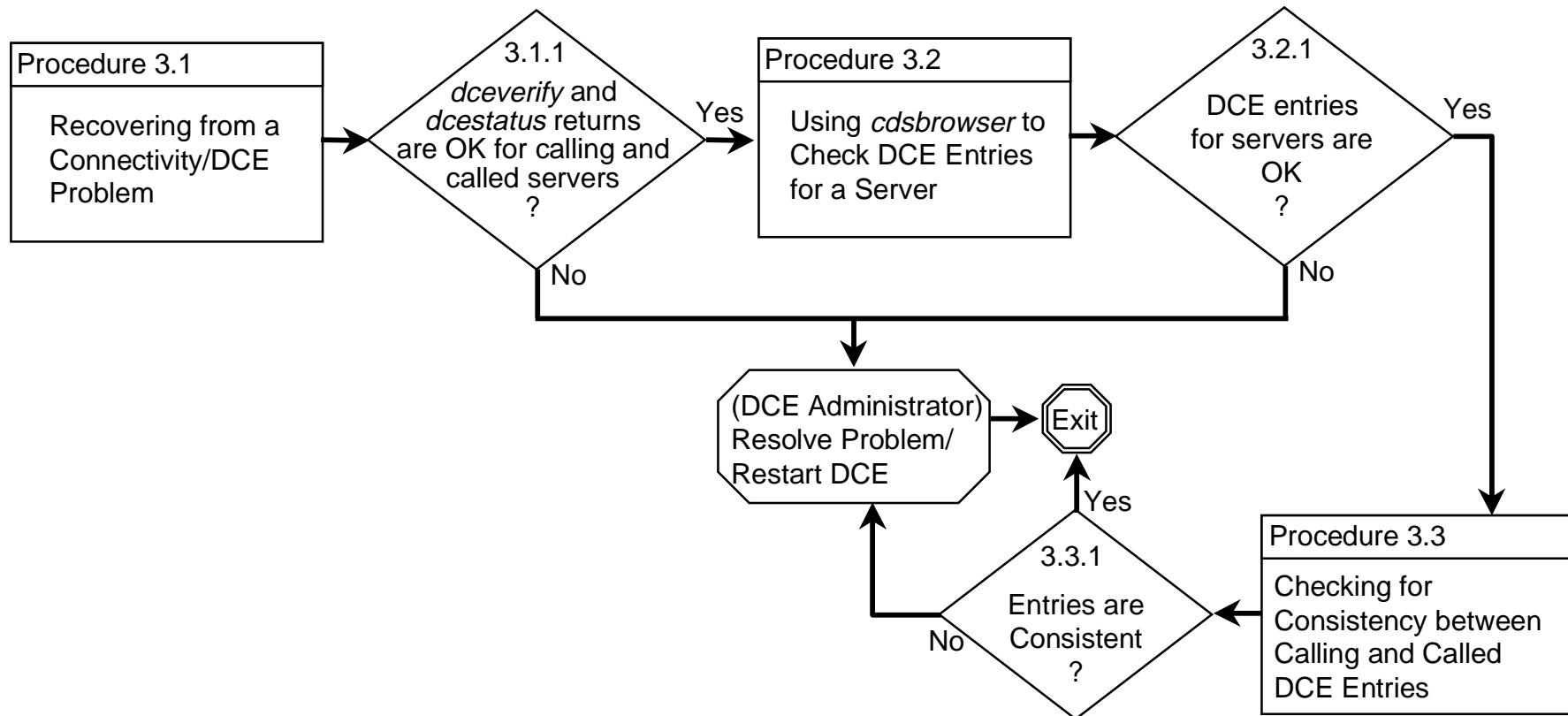
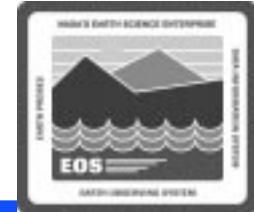


Checking Server Log Files

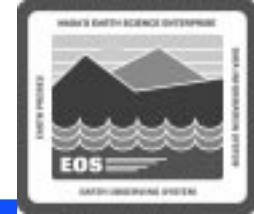


- **Log files:** Information on possible sources of disruption in communications, server function, and many other potential trouble areas
- **Two log files for a server**
 - **.ALOG:** application log captures events, with level of detail dependent on AppLogLevel parameter setting (setting of 0 provides full trace, 1 provides messages for major events, 2 gives records of errors, 3 turns log off)
 - **Debug.log:** log captures detailed debug data, with level of detail dependent on DebugLevel parameter setting (setting of 3 provides full trace, 2 provides major events, 1 captures status and related errors, 0 turns log off)
- **Other logs (e.g., .err logs for processing, script logs, such as granule delete log)**

3.0: Connectivity/DCE Problems



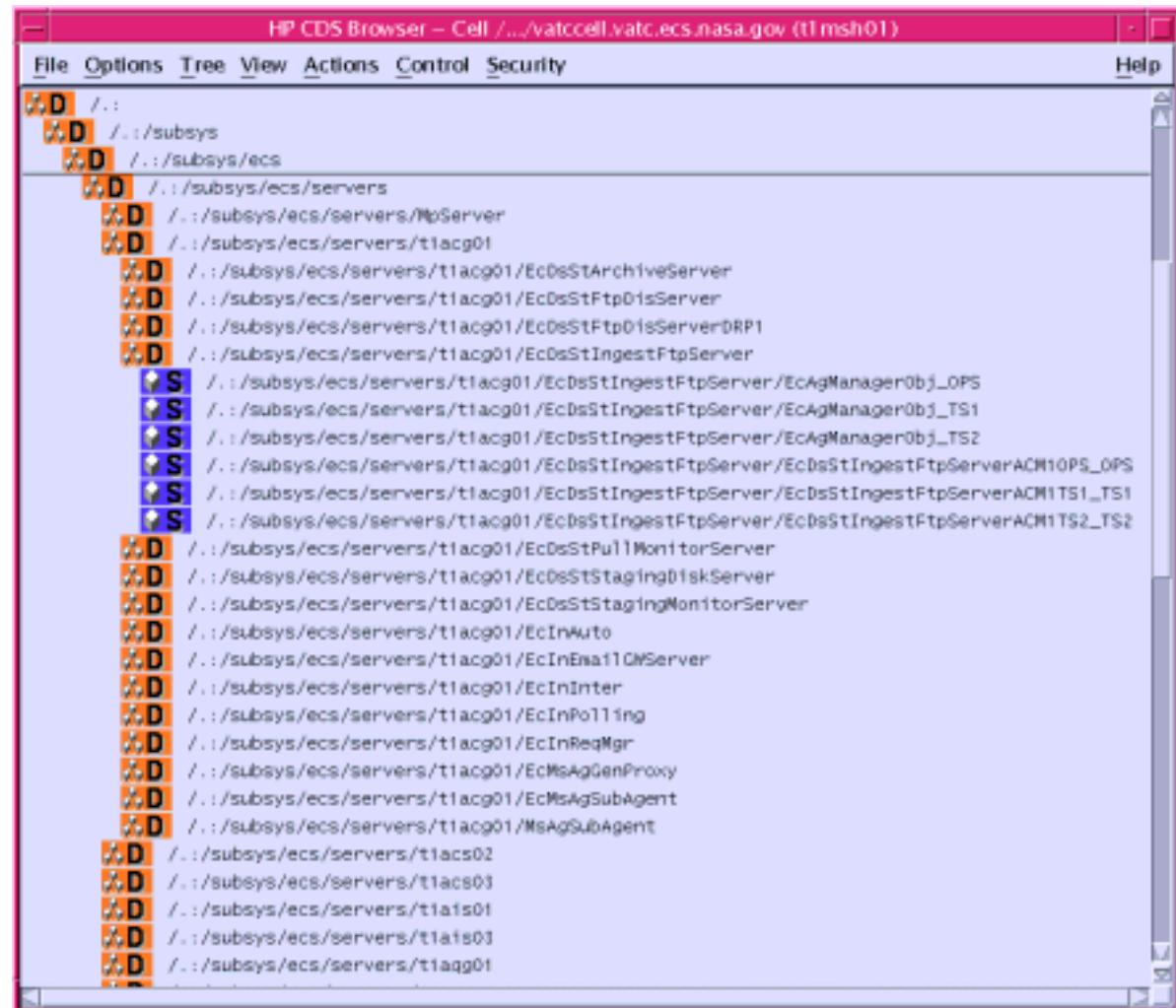
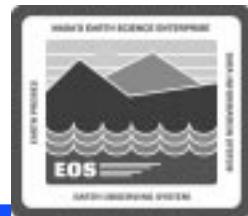
Connectivity/DCE Problems



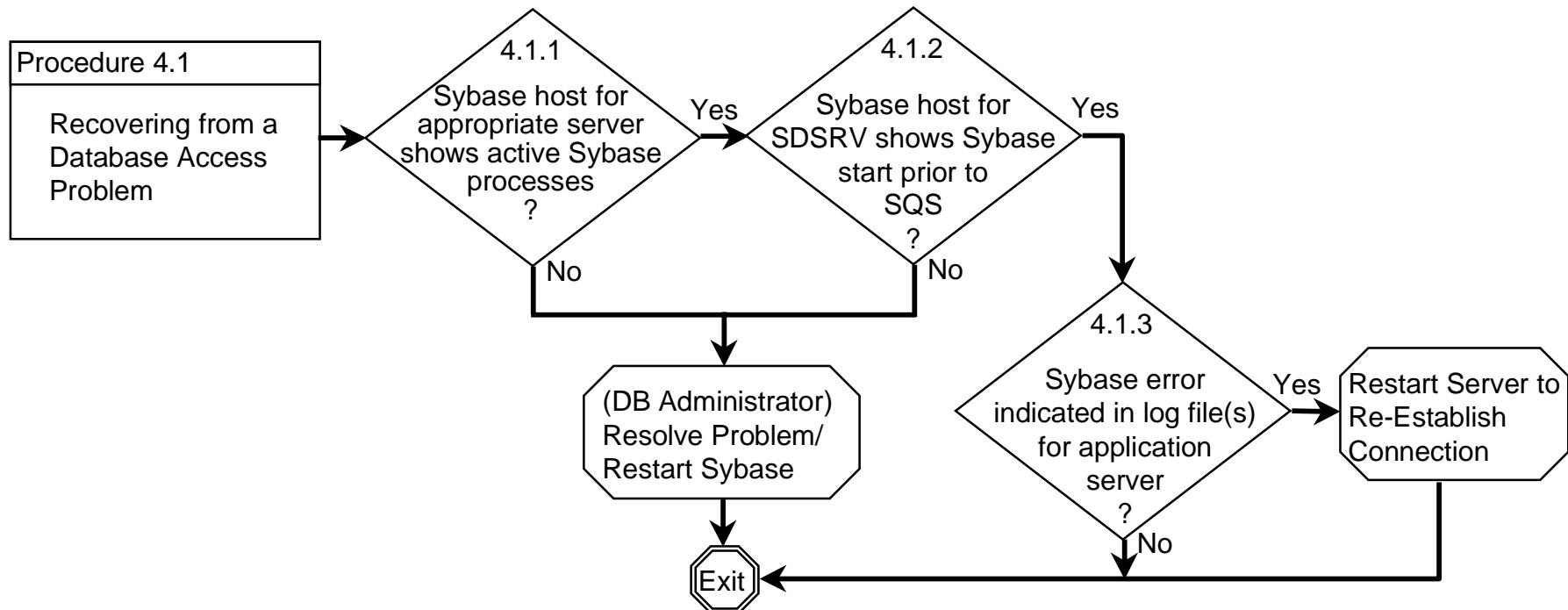
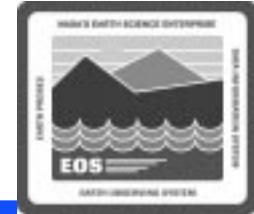
- ECS depends on communications in a Distributed Computing Environment (DCE)
- Review of server log files may point the way
 - Both the called server and the calling server
- Ensure servers are up
- Ping by name
- Run *dceverify* and *dcestatus*
- Use *cdsbrowser* to check DCE entries for a server
- Ensure that the DCE entry being used by the calling server/client matches the DCE entry for the called server



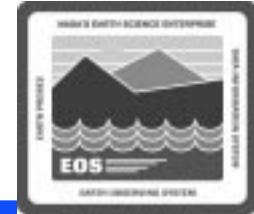
Cdsbrowser Screens



4.0: Database Access Problems

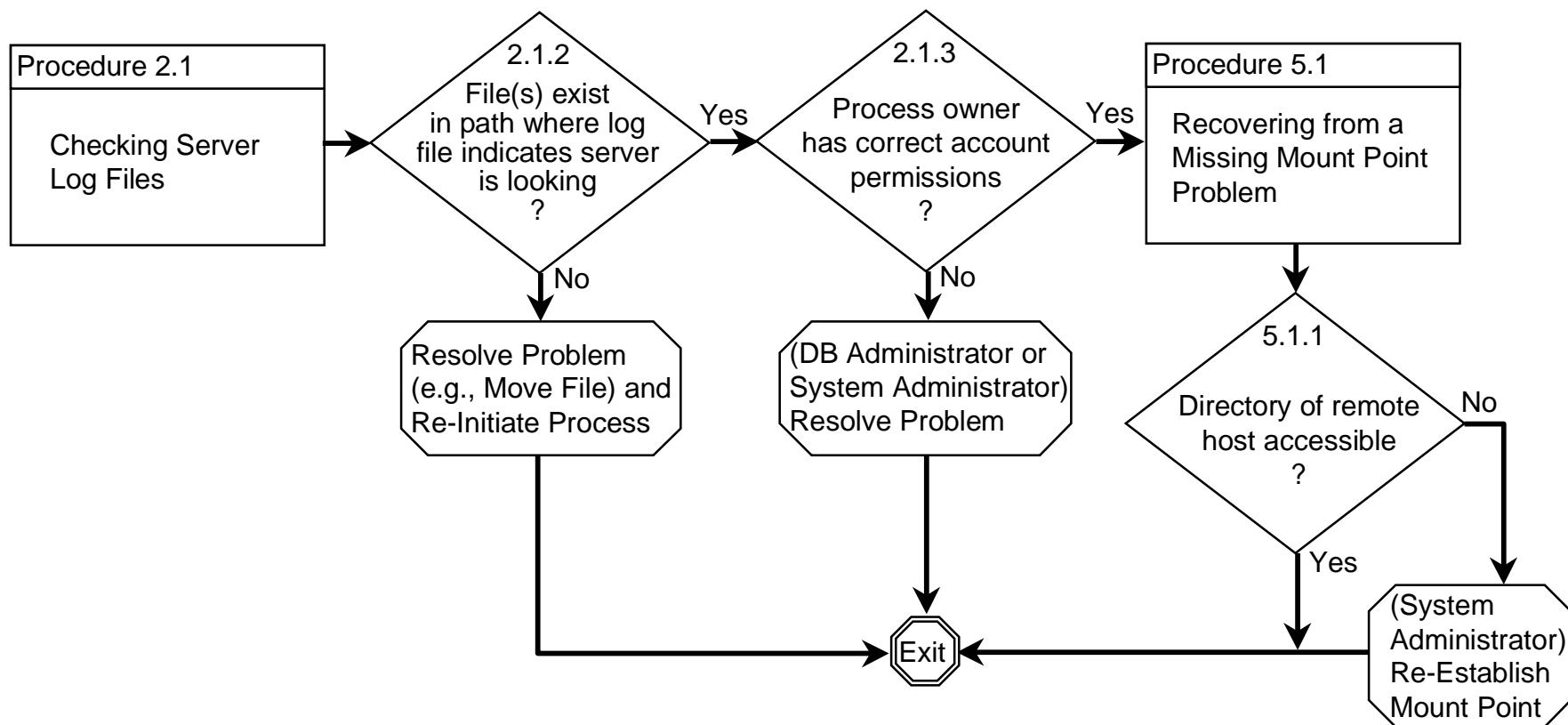
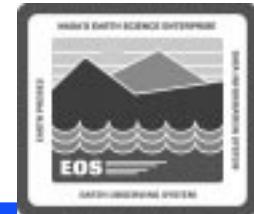


Database Access Problems

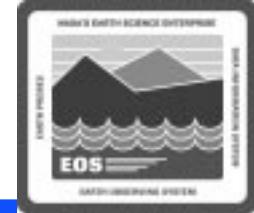


- Most ECS data stores use the Sybase database engine
- Sybase hosts listed in Document 920-TDx-009 ($x = E$ for EDC, $= G$ for GSFC, $= L$ for LaRC, $= N$ for NSIDC)
- On Sybase host, *ps -ef | grep dataserver* and *ps -ef | grep sqs* to check that SQS was started after Sybase dataserver processes (Note: This applies only to host for SDSRV database)
- On application host, *grep Sybase <logfilename>* to check for Sybase errors

5.0: File Access Problems

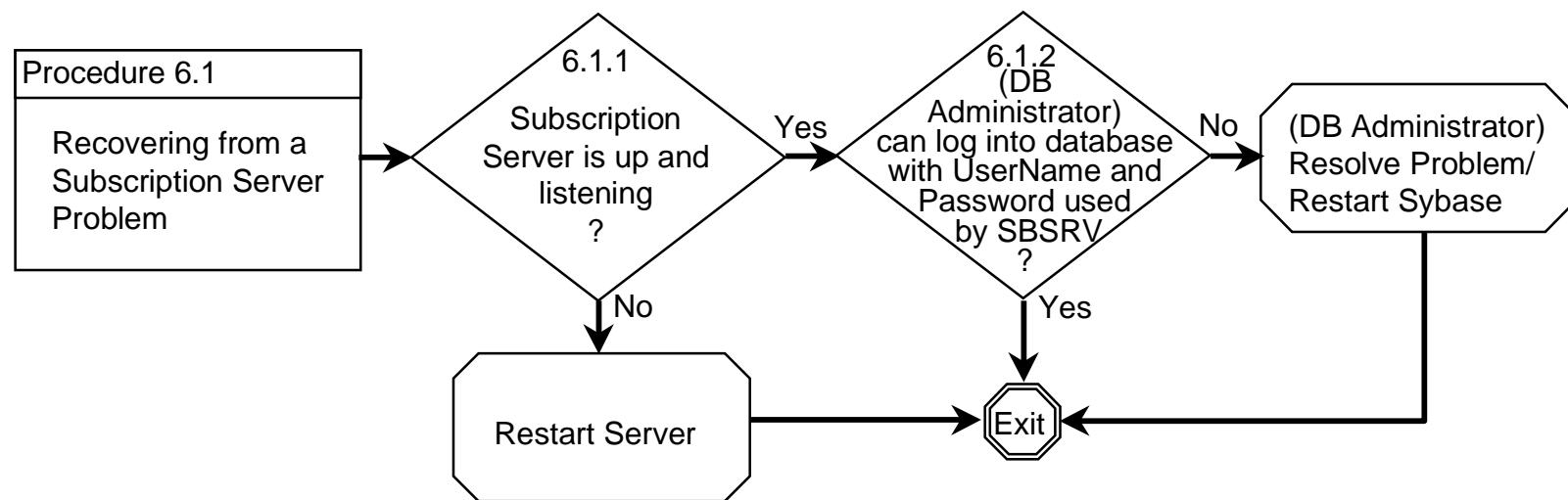
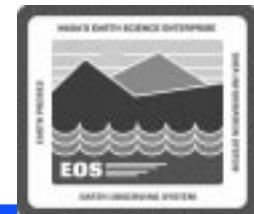


File Access/Mount Point Problems

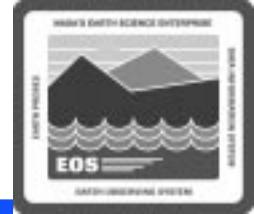


- ECS depends on remote access to files
- Ensure file is present in path where a client is seeking it
- Ensure correct file permissions
- Check for lost mount point and re-establish if necessary
 - Engineering Technical Directive: *NFS Mount Point Installation/Update Standard Procedure*

6.0: Subscription Problems

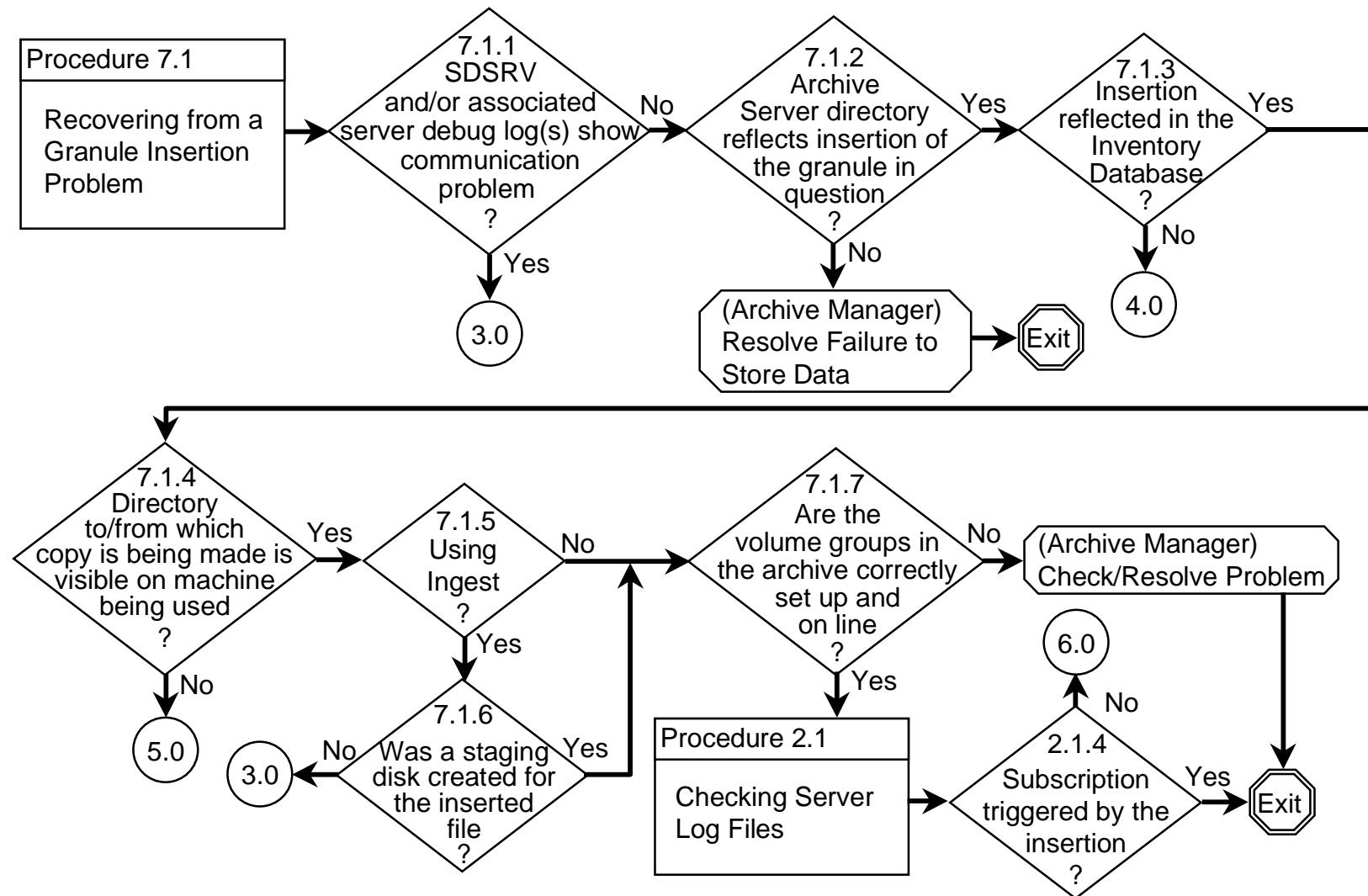
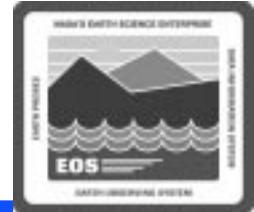


SBSRV Problem

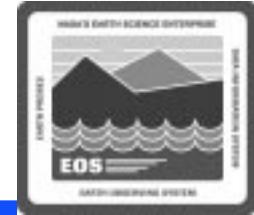


- SBSRV plays key role in many ECS functions
- Ensure SBSRV is up and listening
- Use SBSRV GUI to add a subscription for FTPpush of a small data file
- Have Database Administrator attempt to log in to Sybase (on the SBSRV database host with the appropriate Sybase username and password)

7.0: Granule Insertion Problems

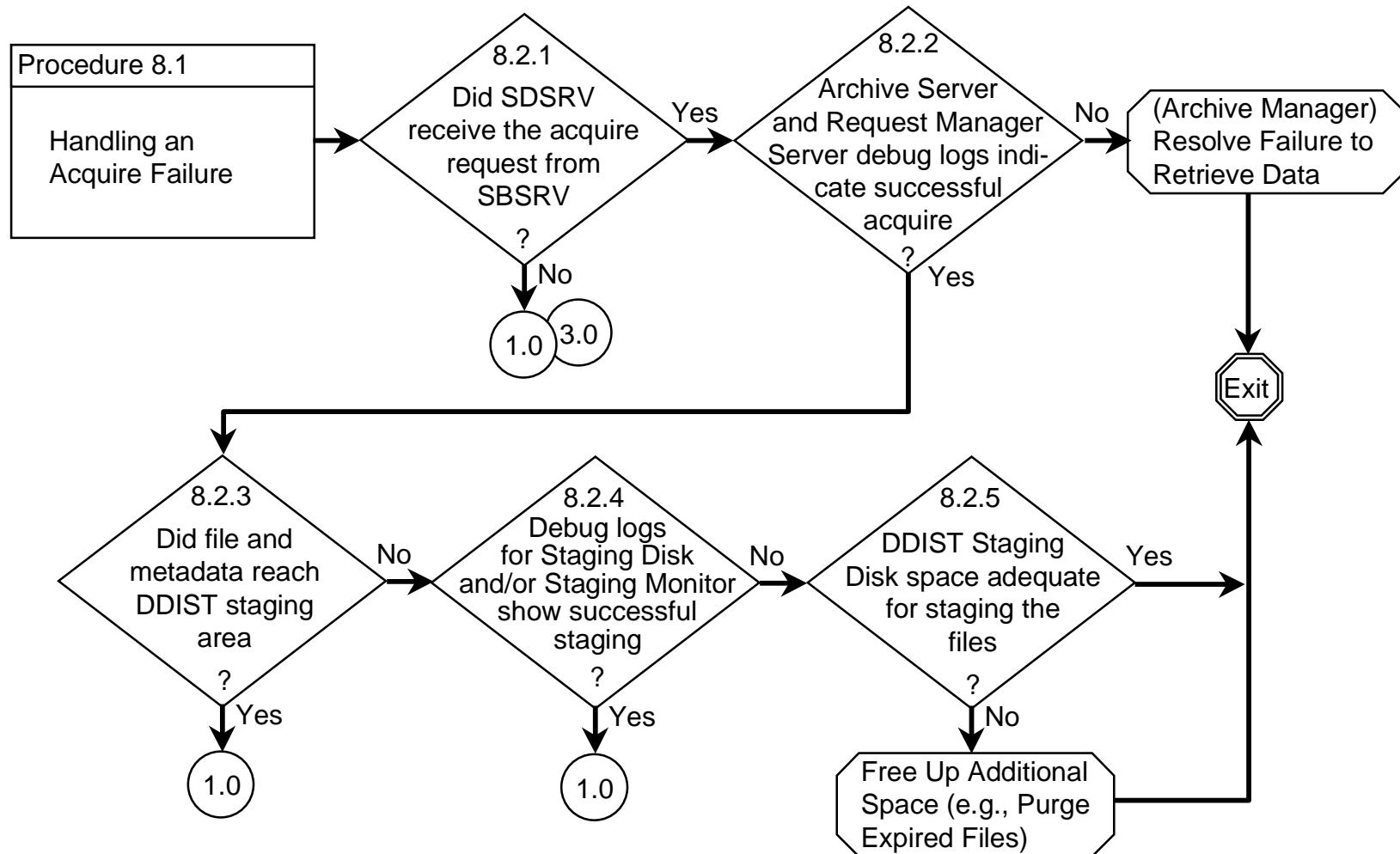
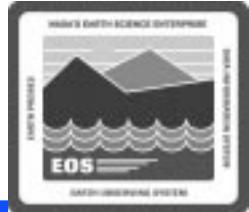


Granule Insertion Problems

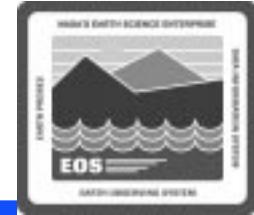


- ECS depends on successful archiving functions
- Check server logs (SDSRV, Archive Server, Request Manager Server) for communications errors
- Run Check Archive Script for consistency between Archive and Inventory
- List files in Archive to check for file insertion (`/dss_stk1/<mode>/<data_type_directory>`)
- Database Administrator check SDSRV Inventory database for file entry
- Check mount points on Archive and SDSRV hosts
- If dealing with Ingest, check for staging disk in *drp-* or *icl*-mounted staging directory
- Archive Manager check volume group set-up and status
- Check SDSRV and SBSRV logs to ensure that subscription was triggered by the insertion

8.0: Acquire Problems

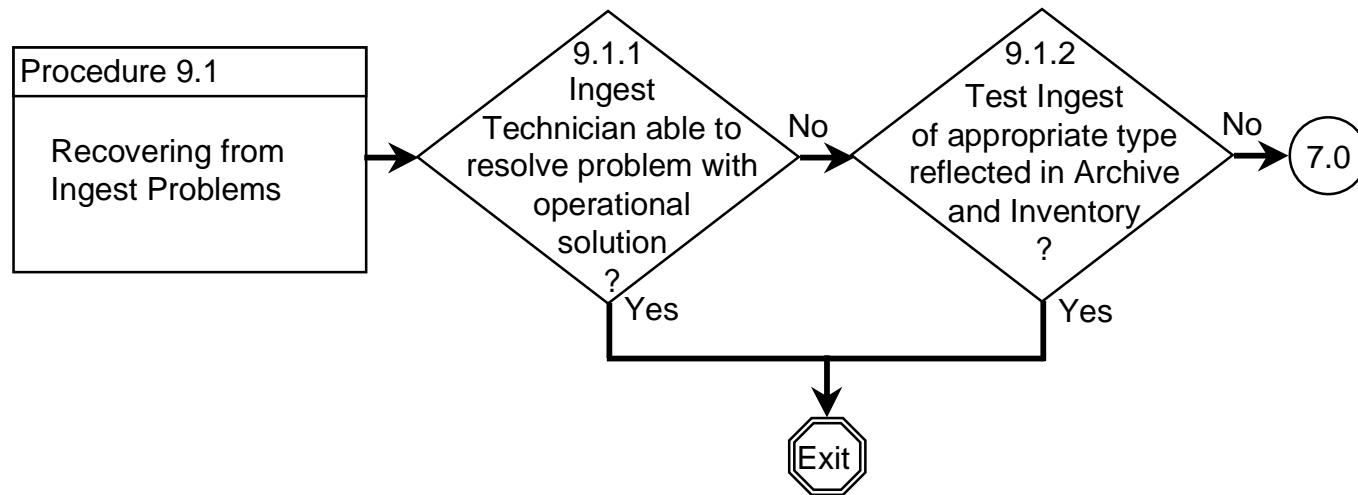
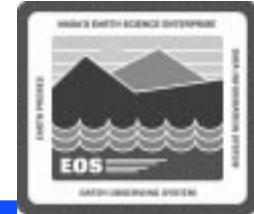


Acquire Problems

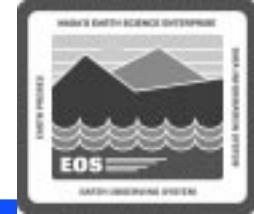


- Functions requiring stored data are dependent on capability to acquire data from the Archive
- Check SBSRV log for Acquire request to SDSRV
- Check DDIST log for sending of e-mail notification to user
- Check for Acquire failure
 - Check SDSRV GUI for receipt of Acquire request
 - Check SDSRV logs for Acquire activity
 - Check Archive Server log for Acquire activity and Request Manager Server log for handling of the request
 - Check DDIST staging area for file and metadata
 - Check Staging Disk log for Acquire activity errors
 - Check space available in the staging area on the DDIST server

9.0: Ingest Problems



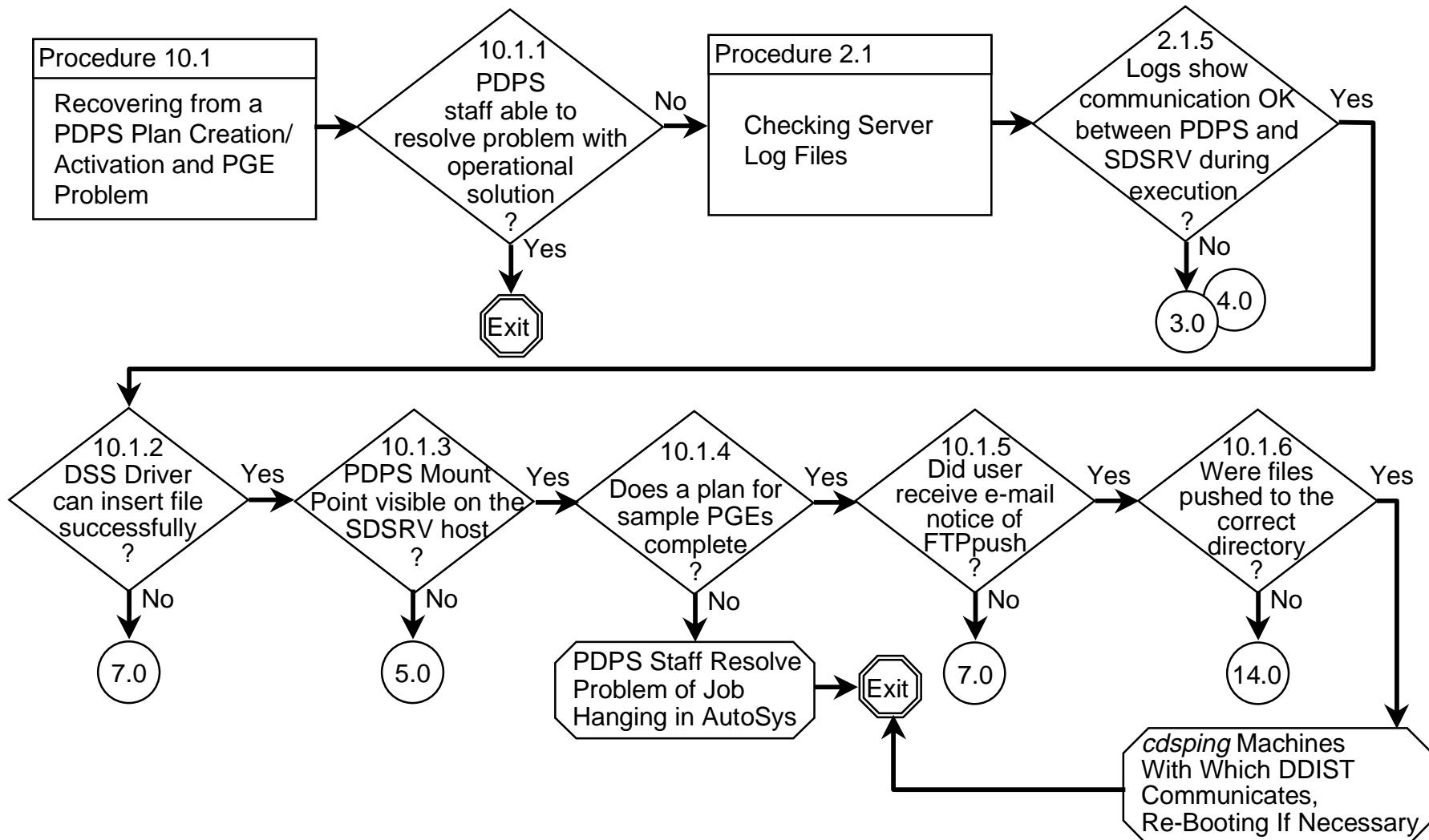
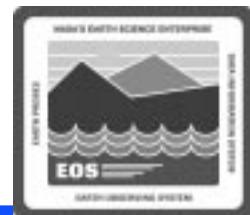
Ingest Problems



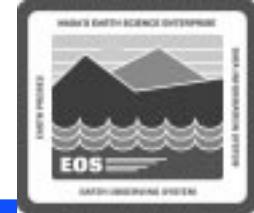
- **Ingest problems vary depending on type of Ingest**
- **Ingest GUI should be the starting point; Ingest technician/Archive Manager may resolve many Ingest problems (e.g., Faulty DAN, Threshold problems, disk space problems, FTP error, Ingest processing error)**
- **Have technician perform a test ingest of appropriate type**
 - Check for granule insertion problems
 - Check Archive and Inventory databases for appropriate entries



10.0: Planning and Data Processing Problems

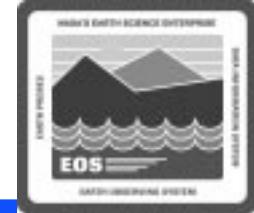


PDPS Plan Creation/Activation and PGE Problems



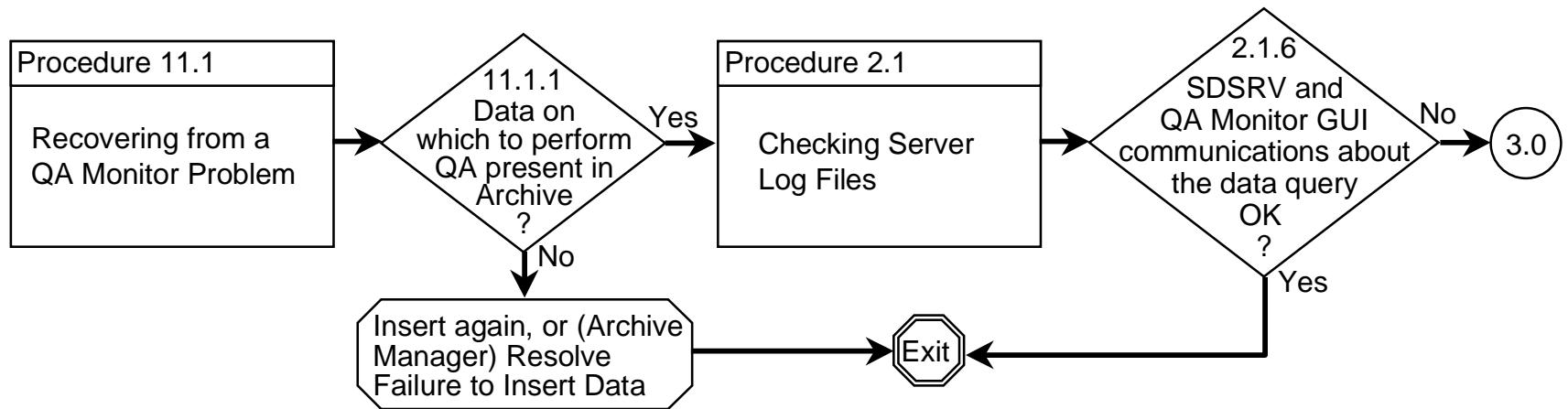
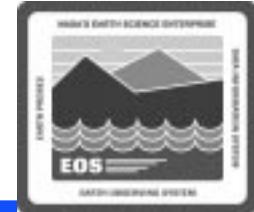
- Production Planning and Processing depend on registration and functioning of PGEs, and on data insertion and archiving
- Initial troubleshooting by PDPS personnel
- Check logs for evidence of communications problems between PDPS and SDSRV
- Have PDPS check for failed PGE granule; refer problem to SSI&T?
- Insert small file and check for granule insertion problems
- Check that PDPS mount point is visible on SDSRV and Archive Server hosts

PDPS Plan Creation/Activation and PGE Problems (Cont.)

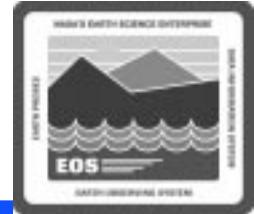


- Have PDPS create and activate a plan for sample PGEs (e.g., ACT and ETS)
 - Ensure necessary input and static files are in SDSRV
 - Ensure necessary ESDTs are installed
 - Ensure there is a subscription for output (e.g., AST_08)
- Check for PDPS run-time directories
- Determine if the user in the subscription received e-mail concerning the FTPpush
- Determine if the files were pushed to the correct directory
- Execute *cdsping* of machines with which DDIST communicates from x0dis02

11.0: Quality Assessment Problems

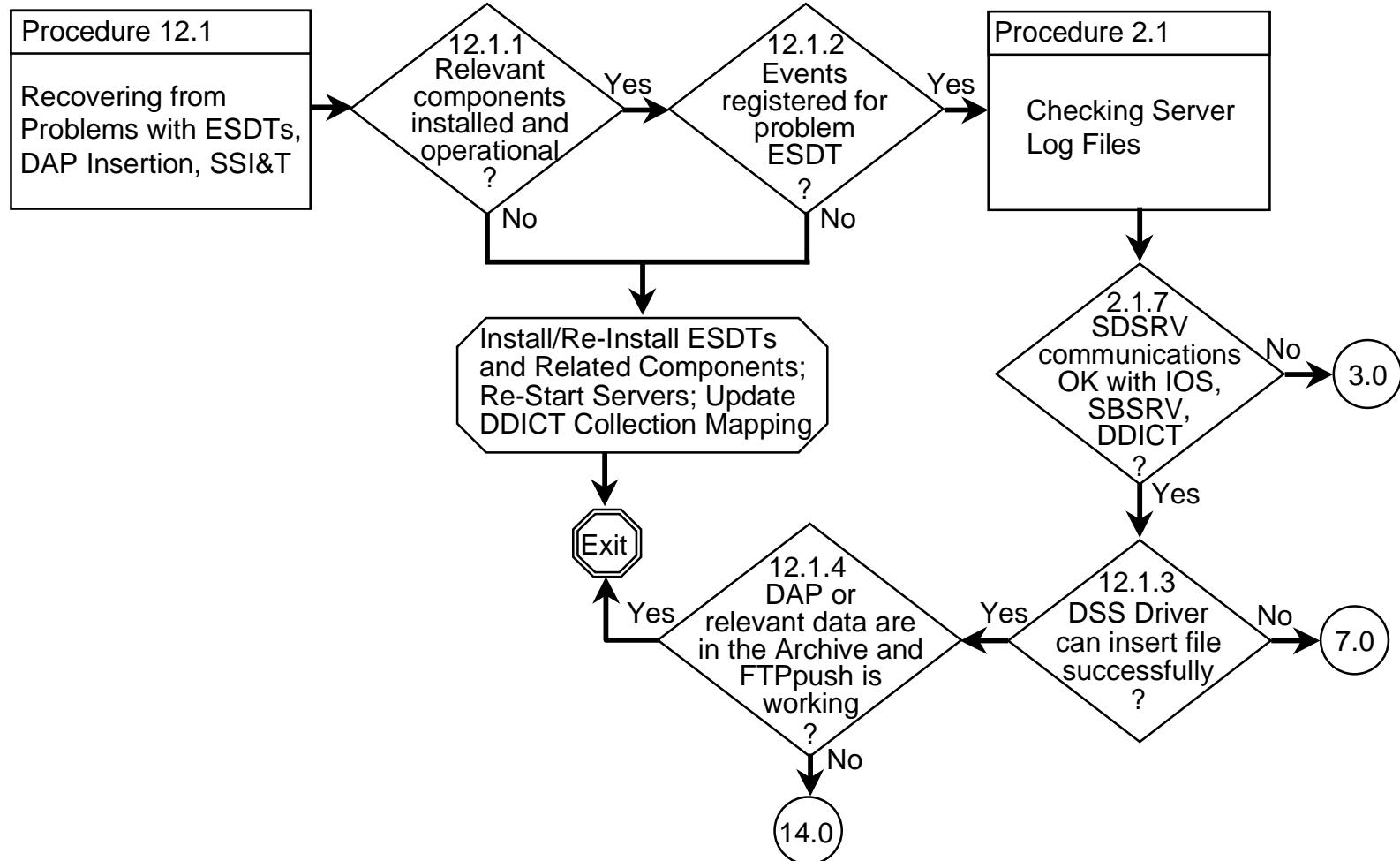
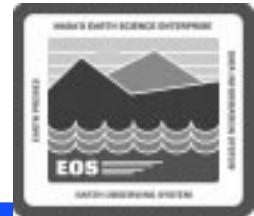


QA Monitor Problems

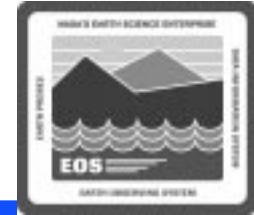


- **QA Monitor GUI is used to record the results of a QA check on a science data product (update QA flag in the metadata)**
- **Operator may handle error messages identified in Operations Tools Manual (Document 609)**
- **Check that the data requested are in the Archive**
- **Check SDSRV logs to ensure that the data query from the QA Monitor was received**
- **Check QA Monitor GUI log to determine if the query results were returned**
 - If not, check SDSRV logs for communications errors

12.0: Problems with ESDTs, DAP Insertion, SSI&T

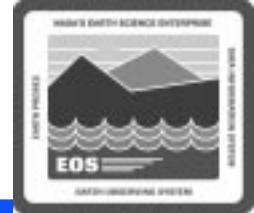


ESDT Problems



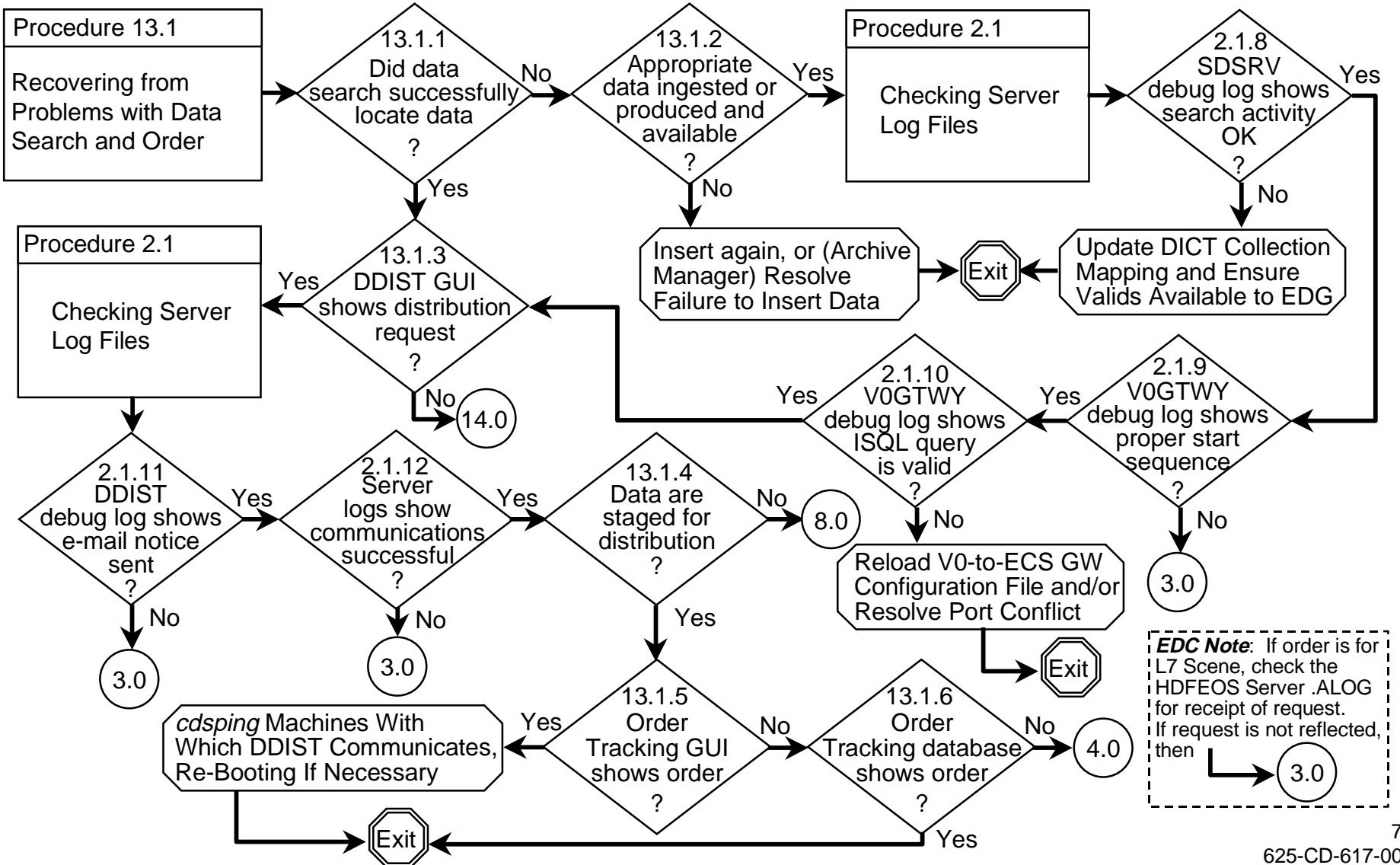
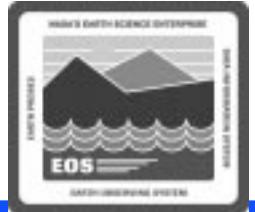
- Each ECS data collection is described by an ESDT
 - Descriptor file has collection-level metadata attributes and values, granule-level metadata attributes (values supplied by PGE at run time), valid values and ranges, list of services
- Check SDSRV GUI to ensure ESDT is installed
- Check SBSRV GUI to ensure events are registered
- Check that IOS and DDICT are installed and up
- Check SDSRV GUI for event registration in ESDT Descriptor information
- Check log files for errors in communication between SDSRV, IOS, SBSRV, and DDICT
- If necessary, perform collection mapping for DDICT

Problems with DAP Insertion/ Acquire and SSI&T Tools/GUIs

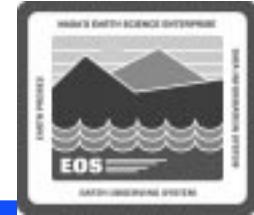


- Delivered Algorithm Packages (DAPs) are the means to receive new science software
- Check that Algorithm Integration and Test Tools (AITT) are installed
- Check that ESDTs are installed
- Check for granule insertion problems
- Check archive for presence of the DAP
- Check for problems with FTPpush distribution

13.0: Problems with Data Search and Order

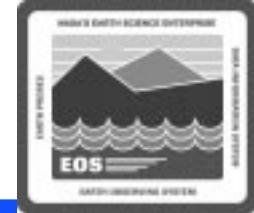


Data Search Problems



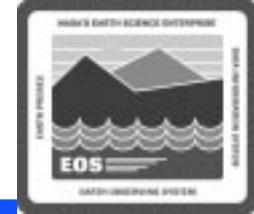
- Data Search and Order functions, including V0GTWY/DDICT connectivity, are key to user access
- List files in Archive to check for presence of file (`/dss_stk1/<mode>/<data_type_directory>`)
- Check SDSRV logs for problems with search
- Review V0GTWY log to check that V0GTWY is using a valid *isql* query
- Ensure compatibility of collection mapping database used by DDICT and the EOS Data Gateway Web Client search tool
 - If necessary, perform collection mapping for DDICT (using DDICT Maintenance Tool)
 - Contact EOSDIS V0 Information Management System to check status of any recently exported ECS valids

Data Order Problems



- **Registered user must be able to order products**
- **Check for data search problems**
- **Use DDIST GUI to determine if DDIST is handling a request for the data, and to monitor progress**
- **Determine if the user received e-mail notification**
- **Check server logs to determine where the order failed; check SDSRV GUI to determine if SDSRV received the Acquire request from V0GTWY**

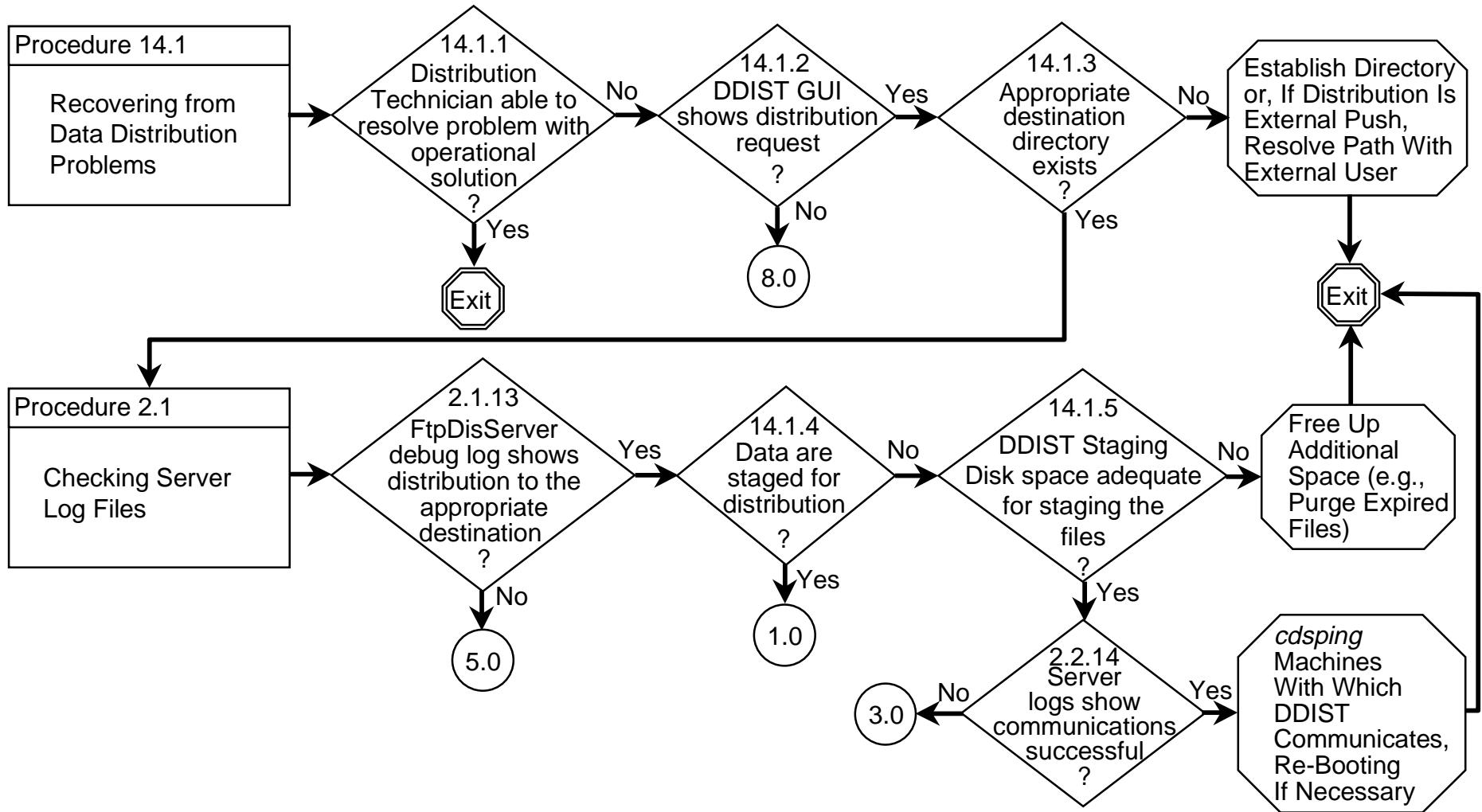
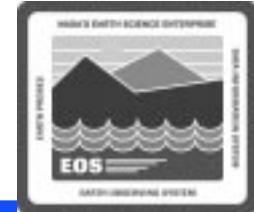
Data Order Problems (Cont.)



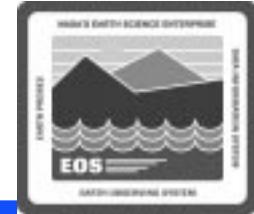
- Check DDIST staging area for presence of data; check staging disk space
- Execute *cdsping* of machines with which DDIST communicates from x0dis02
- Use ECS Order Tracking GUI to check that the order is reflected in MSS Order Tracking; check database
- If order is for L7 Scene data, check HDFEOS Server .ALOG to determine if the HDFEOS Server received the request



14.0: Data Distribution Problems

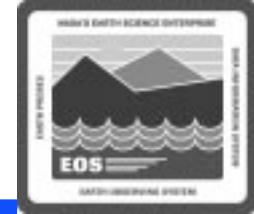


Problems with FTPpush Distribution



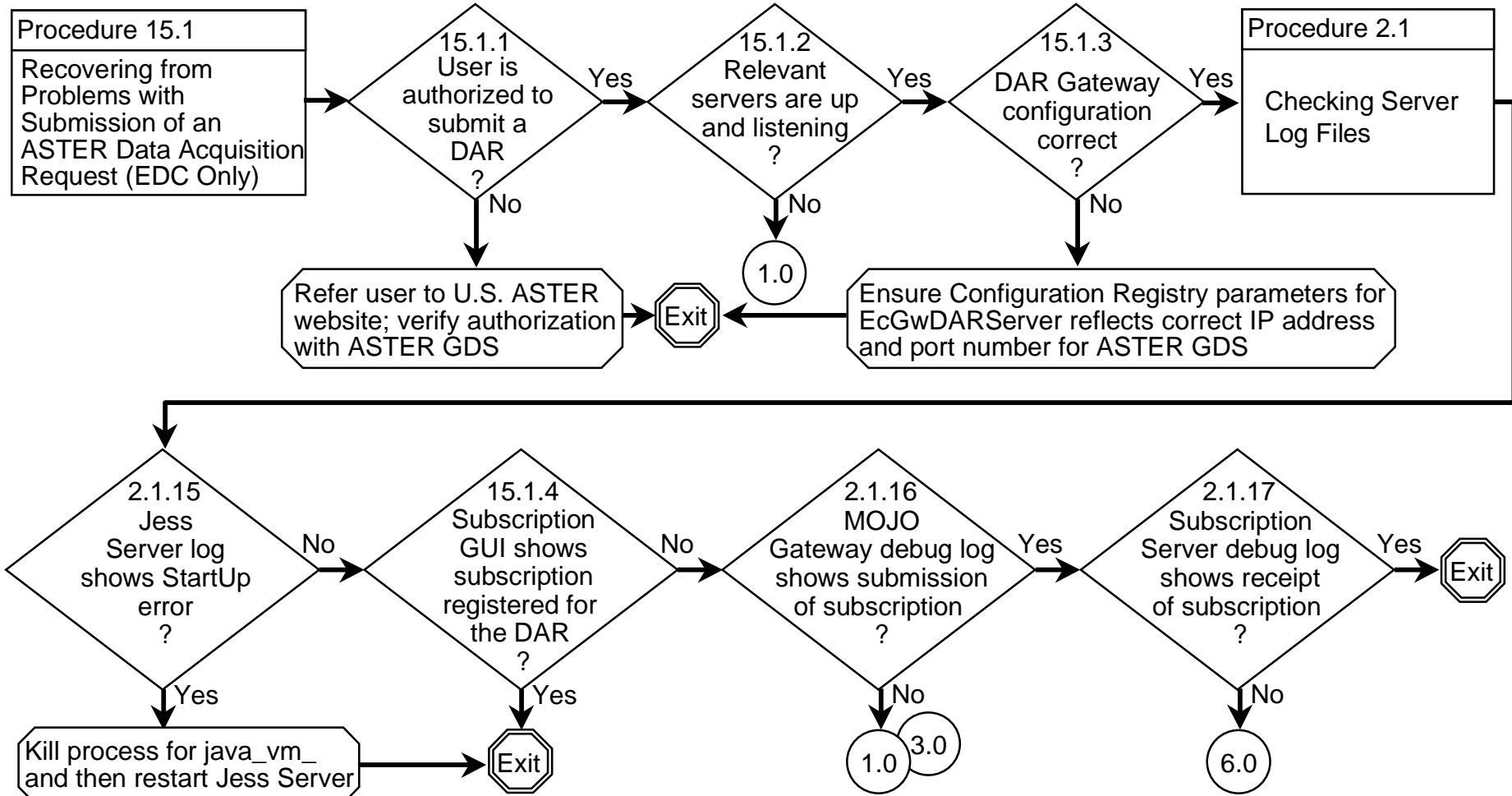
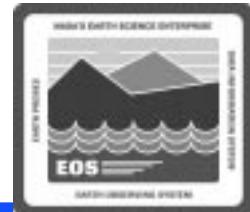
- **FTPpush process is central to many ECS functions**
- **Use DDIST GUI to determine if DDIST is handling a request for the data, and to monitor progress**
- **Check server logs (FtpDis, DDIST) to ensure file was pushed to correct directory**
- **Check that the directory exists**
- **Check FtpDis logs for permission problems**
- **Check for Archive Server staging of file; check staging disk space**
- **Check server logs to find where communication broke down**

Problems with FTPpull Distribution

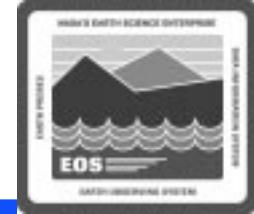


- **FTPpull is key mechanism for data distribution**
- **Use DDIST GUI to determine if DDIST is handling a request for the data, and to monitor progress**
- **Check that the directory to which the files are being pulled exists**
- **Check FtpDis logs for permission problems**
- **Check for Archive Server staging of file**
- **Check server logs to find where communication broke down**
- **Execute *cdsping* of machines with which DDIST communicates from x0dis02**

15.0: Problems with Submission of a Data Acquisition Request (EDC Only)

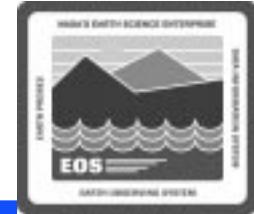


Problems with DAR Submission



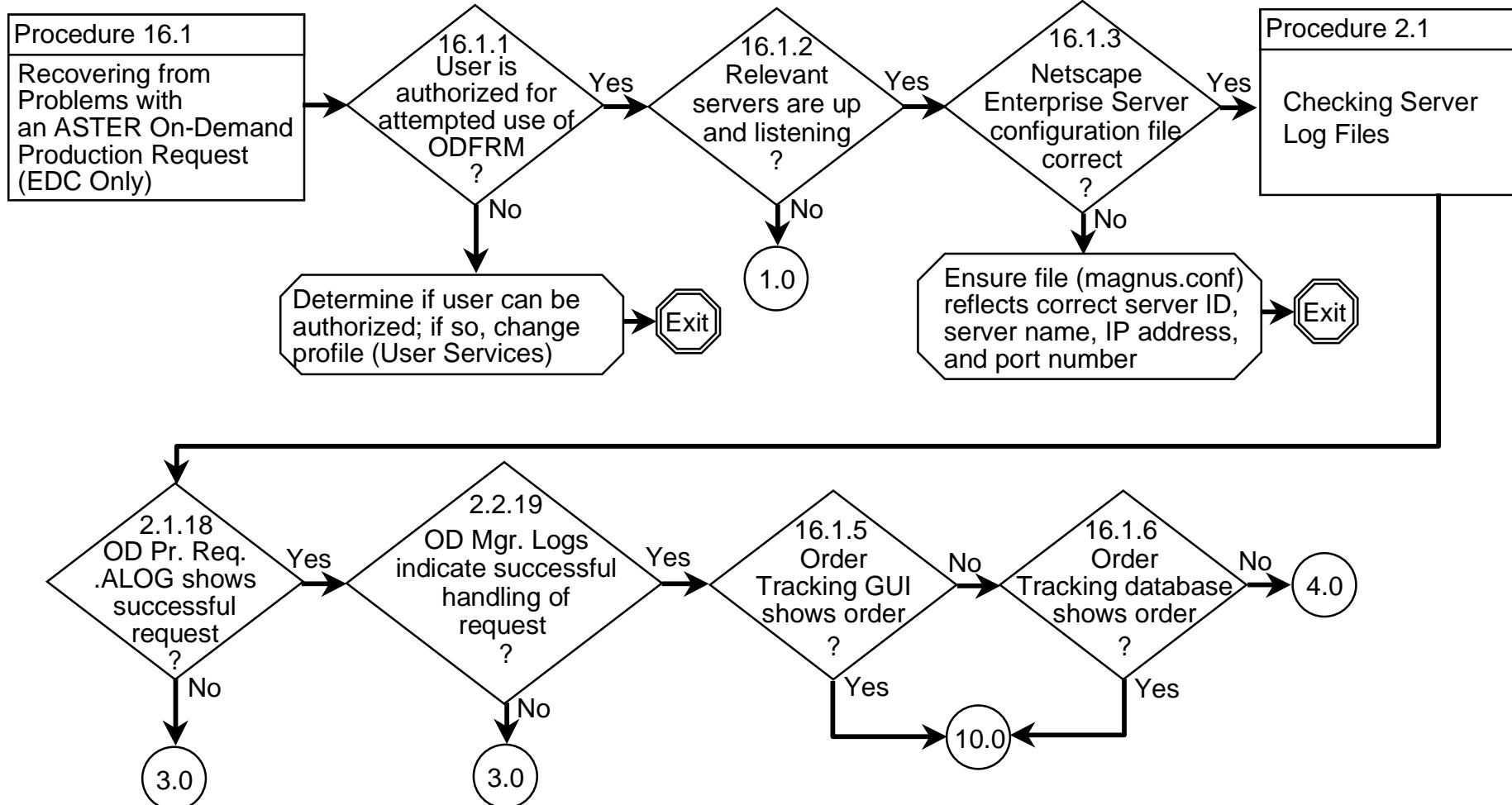
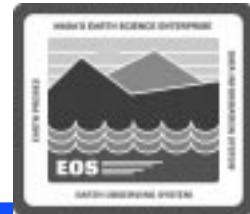
- EDC supports the Java DAR Tool to enable authorized users to submit ASTER Data Acquisition Requests to the ASTER GDS
- Check for accounts
 - Registered user with DAR permissions
 - Account established at ASTER GDS
- Check that servers are up and listening
 - EcMsAcRegUserSrvr (on e0mss21)
 - EcGwDARServer (on e0ins01)
 - EcSbSubSrvr (on e0ins01)
 - EcCsMojoGateway (on e0ins01)
 - EcCIWbJestSv.jar (on e0ins02)
 - EcloAdServer (on e0ins02)
 - Netscape Enterprise Server (on e0dms03)

DAR Submission Problems (Cont.)

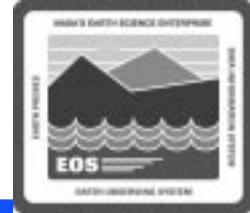


- Check Configuration Registry to ensure that the IP address and port for the EcGwDARServer are correct (Note: This check may need to be done by the Configuration Management Administrator)
- Examine server log files
 - Ongoing activity indicates servers are functioning
 - Check at time of problem for evidence of communications breakdown or other problems
- Determine if subscription worked
 - Mojo Gateway debug log should reflect submission of subscription
 - Subscription Server debug log should reflect receipt of subscription

16.0: Problems with On-Demand Production Requests (EDC Only)

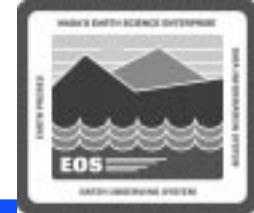


Problems with On-Demand Production Requests



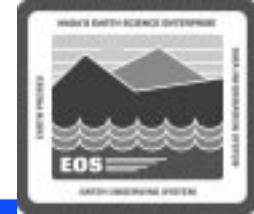
- Authorized users may use the On-Demand Form Request Manager (ODFRM) to submit on-demand requests for production of ASTER L1B and Digital Elevation Model data; any user may order other ASTER higher-level data products
- Check user account information
 - Registered user with ODFRM permissions
- Check that servers are up and listening
 - EcMsAcRegUserSrvr (on e0mss21)
 - EcMsAcOrderSrvr (on e0mss21)
 - Netscape Enterprise Server (on e0dms03)
 - EcPIOdMgr (on e0pls02)
 - EcSbSubSrvr (on e0ins01)
 - EcloAdServer (on e0ins02)

Problems with On-Demand Production Requests (Cont.)



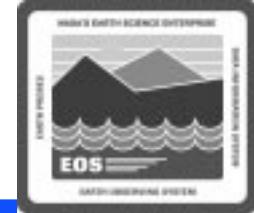
- Check Enterprise Server configuration file for correct setup of server and port
- Check server log files for communication between ODFRM and ODPRM and correct handling of on-demand request
 - Enterprise Server access and *errors* logs (on e0dms03)
 - EcCIOdProductRequest.ALOG (on e0ins02)
 - EcPIOdMgr.ALOG (on e0pls02)
 - EcPIOdMgrDebug.log (on e0pls02)
- Use ECS Order Tracking GUI to check that the order is reflected in MSS Order Tracking; check database

Trouble Ticket (TT)



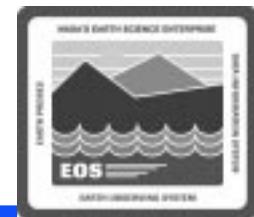
- Documentation of system problems
- COTS Software (Remedy)
- Documentation of changes
- Failure Resolution Process
- Emergency fixes
- Configuration changes → CCR

Using Remedy



- **Creating and viewing Trouble Tickets**
- **Adding users to Remedy — TT Administrator**
- **Controlling and changing privileges in Remedy — TT Administrator**
- **Modifying Remedy's configuration — TT Administrator, upon approval by Configuration Management Administrator**
- **Generating Trouble Ticket reports — System Administrator, others**

Remedy RelB-User Schema Screen



Action Request System -- User (cyclops)

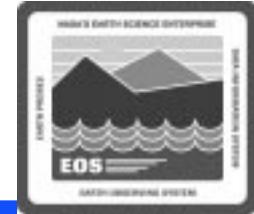
File Edit Query Actions Macros Windows Help

Entry-Id	Status	License Type
<input type="text"/>	◆ Current	◆ Read ◆ Fixed ◆ Floating
Login name	Password	
<input type="text"/>	<input type="text"/>	
Email Address	Group list	
<input type="text"/>	<input type="button"/> <input type="button"/>	
Full Name	Phone Number	
<input type="text"/>	<input type="button"/>	<input type="text"/>
Home DAAC		
<input type="text"/>		
Default Notify Mechanism		Full Text License Type
◆ None ◆ Notifier ◆ E-mail		◆ None ◆ Fixed ◆ Floating
Creator	Create-date	
<input type="text"/>	<input type="text"/>	
Last-modified-by	Modified-date	
<input type="text"/>	<input type="text"/>	

() " + - * / % = != < > <= >= LIKE AND OR NOT Fields

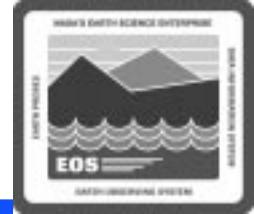
Query

Adding Users to Remedy



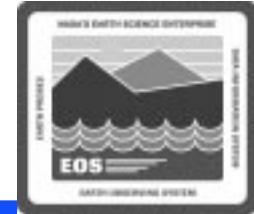
- Status
- License Type
- Login Name
- Password
- Email Address
- Group List
- Full Name
- Phone Number
- Home DAAC
- Default Notify Mechanism
- Full Text License
- Creator

Changing Privileges in Remedy



- **Access privileges (for fields)**
 - View
 - Change
- **Privilege change methods**
 - Change group assignment
 - Change privileges of a group
 - Use Admin tool to define group access for schemas
(Remedy databases)

Remedy Admin Tool - Schema List



Action Request System -- Administrator Tool -- s0moh01

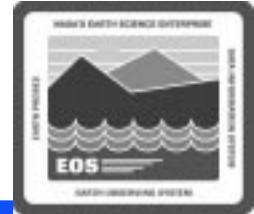
File Category Edit Help

Schema List

- AR:Bug Tracking
- AR>Contact Info
- AR:Job Requisitions
- AR:Lunch
- AR:Messages
- AR:Recruiting
- AR:Sales Leads
- DDTS-Project-List-Schema
- DemoHD:Solutions
- DemoHD:Staff
- DemoHD:Types
- DemoHD:UserDetail
- DemoHelpDesk
- DemoStartup
- Group
- RelB-Contact Log
- RelB-Hardware Information
- RelB-Menu-Closing Codes
- RelB-Menu-Hardware Resources
- RelB-Menu-Key Words
- RelB-Menu-NotifyGeneral
- RelB-Menu-Problem Type
- RelB-Menu-Software Resources
- RelB-Software Information
- RelB-TT-ForwardToSite
- RelB-TT-NSI
- RelB-TT-Sites
- RelB-TT-Times
- RelB-Trouble Tickets
- Test Schema
- Trouble-Ticket-Xfer
- User

Number of items: 32

Remedy Admin - Group Access



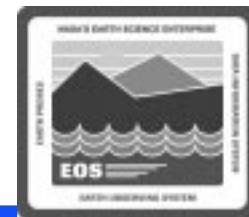
Group Access -- Schemas

Group Resolution Technician

Visible	Hidden	None	Schemas
Visible	Hidden	None	AR:Bug Tracking
Visible	Hidden	None	AR:Contact Info
Visible	Hidden	None	AR:Job Requisitions
Visible	Hidden	None	AR:Lunch
Visible	Hidden	None	AR:Messages
Visible	Hidden	None	AR:Recruiting
Visible	Hidden	None	AR:Sales Leads
Visible	Hidden	None	DDTS-Project-List-Schema
Visible	Hidden	None	DemoHD:Solutions
Visible	Hidden	None	DemoHD:Staff
Visible	Hidden	None	DemoHD:Types
Visible	Hidden	None	DemoHD:UserDetail
Visible	Hidden	None	DemoHelpDesk
Visible	Hidden	None	DemoStartup
Visible	Hidden	None	Group
Visible	Hidden	None	ReIB-Contact Log
Visible	Hidden	None	ReIB-Hardware Information
Visible	Hidden	None	ReIB-Menu-Closing Codes
Visible	Hidden	None	ReIB-Menu-Hardware Resources

Apply Previous List Next List Dismiss

Remedy Admin - Modify Schema

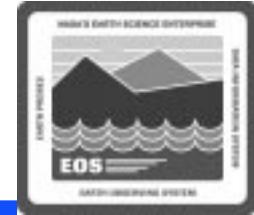


Remedy Schema -- ReID-Trouble Tickets

File Home Default Admin View Schema Name ReID-Trouble Tickets

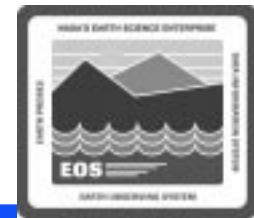
Ticket-ID [EDT]	Ticket Status [New]	Assigned-Priority [Low]	NCR Number []
Submitter Impact [Low]			
Short Description []		Detailed Resolution Log []	
Long-Description []		Resolution Log (End User Seen) []	
Submitter ID []	Assigned-To []	Closing-Code []	Forward-to-1 []
Submitter Name []	Last-modified-by []	Closed-by []	Forward-to-2 []
Submitter Phone []	Create-date []	Closed-date []	Forward-to-3 []
Submitter Email []	Last-Modified-date []	Software Resource []	Forward-to-4 []
Submitter Home DEID []	Related-EDR []	Hardware Resource []	Associated-Contact-Log-ID []
History []	Key-Words []	Duplicate-Master-ID []	Software-Information [Create]
CI []	Problem-Type []	Hardware-Information [Create]	
Time-Assignee-High []		Time-Sel-Prop-High []	
Time-New-High []	Time-Assigned-High []	Time-Tgt-Sel-High []	Time-Sel-Prop-High []
Time-New-Med []	Time-Assigned-Med []	Time-Tgt-Sel-Med []	Time-Sel-Prop-Med []
Time-New-Low []	Time-Assigned-Low []	Time-Tgt-Sel-Low []	Time-Sel-Prop-Low []
Buttons: Apply Set Help... Change History... Bring to Front Send to Back Discard			

Changing Remedy Configuration



- User Contact Log, Category
- User Contact Log, Contact Method
- Configuration Item (CI)

Remedy Admin - Modify Menu



Modify Menu -- RelB-CI

Menu Name

Refresh On Connect On Open On 15 Minute Interval

Menu Type Character Query File SQL

Level 0 **Level 1**

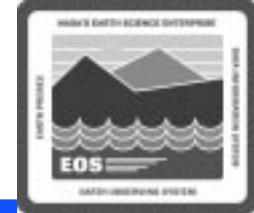
Desktop	
Workbench	
Advertising Se	
Advertising Se	
Local Info Mar	
Distrib Info M	
Data Dictionary	
Ver 0 Interop	
Data Mgmt HWCI	

Label

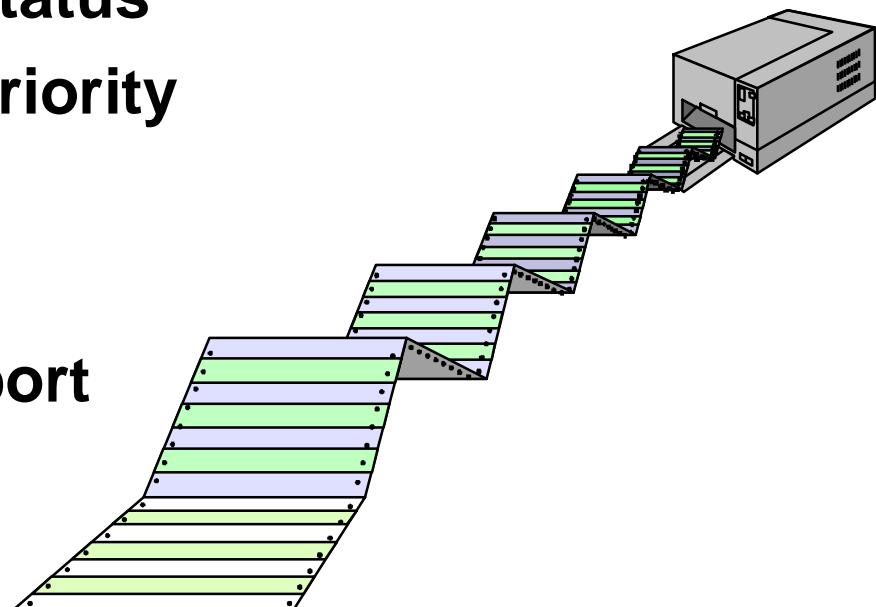
Value

Add New Entries

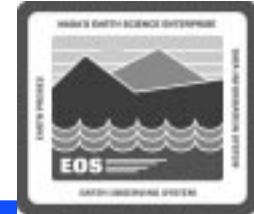
Generating Trouble Ticket Reports



- Assigned-to Report
- Average Time to Close TTs
- Hardware Resource Report
- Number of Tickets by Status
- Number of Tickets by Priority
- Review Board Report
- SMC TT Report
- Software Resource Report
- Submitter Report
- Ticket Status Report
- Ticket Status by Assigned-to



Remedy Admin - Reports



Report -- Remedy Trouble Tickets (00000001)

Define Edit Actions

Custom Report Name: Help Text:

(None Report) >

AllTickets
Assigned-to Report
Average Time To Close TTs
Daily Trouble Tickets
Forward Set Up
Hardware Resource Report
HSI-EBnet-Report
Number of Tickets by Priority
Number of Tickets by Status
Review Board Report
SMC Hardware Report
SMC TT Report
Software Resource Report
Submitter Report
Ticket Status Report
Ticket Status by Assigned-To
TroubleTickets
Usergroup
WeeklyStatus
xferTT.emma

Outputs a report of the number of Tickets assigned to technicians.
Outputs a report of the average time to close trouble tickets.
Sets up the forward script.
Outputs a report sorted and grouped by Hardware Resources and Closing Codes
Sets up the HSI EBnet Forward file.
Outputs the number of Trouble Tickets grouped by assigned priority
Outputs the number of Trouble Tickets grouped by status
Outputs a report of the details of TTs for the TT Review Board
Outputs a report to be sent to the SMC.
Outputs a report sorted by Software Resources and their Closing Codes
Outputs a report by submitter.
Outputs a report sorted and grouped by Ticket Status
Outputs a report sorted and grouped by the last person assigned to a Trouble Ticket
Report cross referencing user names with the groups of which they are a member.
Export data to Access for Weekly Status Report
From Report chose record layout.

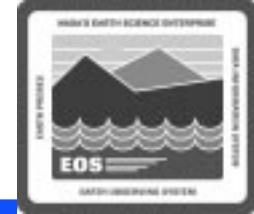
Ticket-Id :
Ticket Status :
Ticket Status-History :
Assigned-Priority :
Short Description :
Submitter Impact :
Forward-to :
Forward-to-email :
Long-Description :
Detailed Resolution Log :
Forwarded-From :
Resolution Log <End User Sees> :
Forwarded-by :
Forward-date :
Submitter ID :
Assigned-To :
Closing Code :
Unique-Identifier :
Forward-to-l-email :
Submitter Name :
Last-modified-by :
Closed-by :
Forwarded-to-l :

Number of matching entries : 321

Layout: Record Column Compressed Text CSV XLS Export

Report to Screen Report to File... Report to Printer... Dismis

Operational Work-around



- Managed by the ECS Operations Coordinator at each center
- Master list of work-arounds and associated trouble tickets and configuration change requests (CCRs) kept in either hard-copy or soft-copy form for the operations staff
- Hard-copy and soft-copy procedure documents are “red-lined” for use by the operations staff
- Work-arounds affecting multiple sites are coordinated by the ECS organizations and monitored by ECS M&O Office staff